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THE COMMERCIAL CAR JOURNAL

Volume XXX
Number 3

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PHILADELPHIA, NOVEMBER 15, 1925

Forty Cents a Copy
Two Dollars a Year

EATON

The "SPEED WAGON" *Bumper*

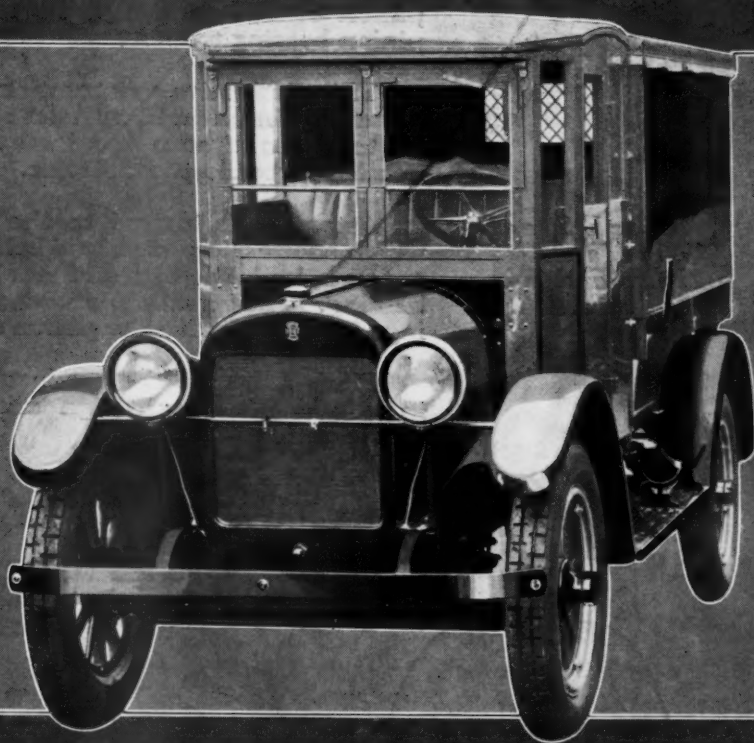
THE Eaton "Speed Wagon" Bumper is increasingly popular as original equipment for light delivery trucks and busses of standard tread.

It is low-priced, simple, sturdy—a 3-in. front bar with strong secondary shock absorbing cushion.

Beautifully finished in heavy nickel on copper, or durable black enamel.

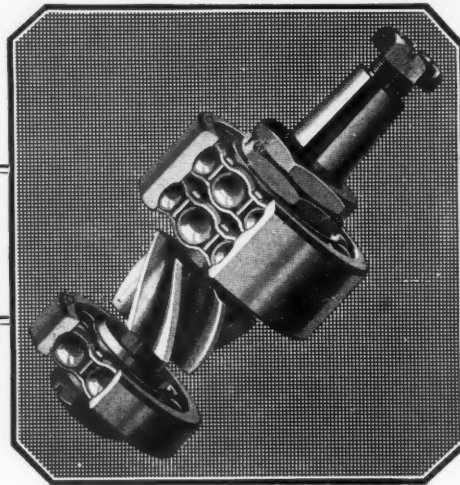


THE EATON AXLE & SPRING CO.
Cleveland



BUMPERS

CLARK



AXLES

Straddle Mounted Pinions for Strength

The pinion gear load on Clark Axles is carried between two bearings, utilizing what the Clark engineers call a "straddle" mounting. The conventional type still adheres to the overhanging pinion construction with its tendency to develop pinion bearing trouble.

This distinctive construction of the "straddle" mounted pinion on Clark Axles reduces pinion trouble to the minimum and insures continuous, economical, trouble-proof service.

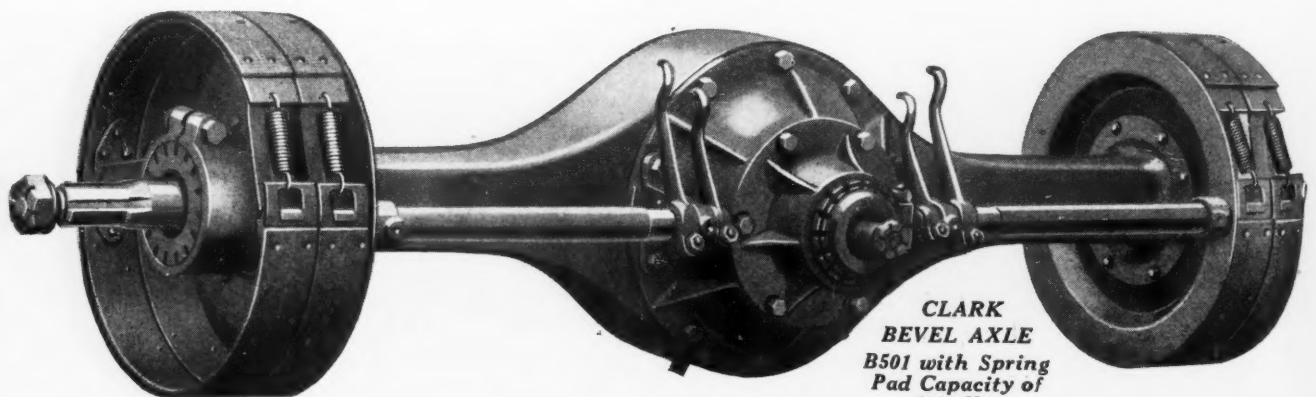
*Clark Steel
Wheels for
Truck and Bus
are unexcelled.*

Attention is invited to the illustration above, which shows the pinion load being carried on a dual annular ball bearing and a single annular ball bearing. The spiral pinion gear between the bearings is integral with the pinion shaft.

*Clark Spiral
Gear Bus Axles
are wide tread
for speed busses.*

Clark Axles are the product of long experience in axle engineering design and unexcelled plant facilities.

Clark Axles are Built by
CLARK EQUIPMENT COMPANY
BUCHANAN, MICH.

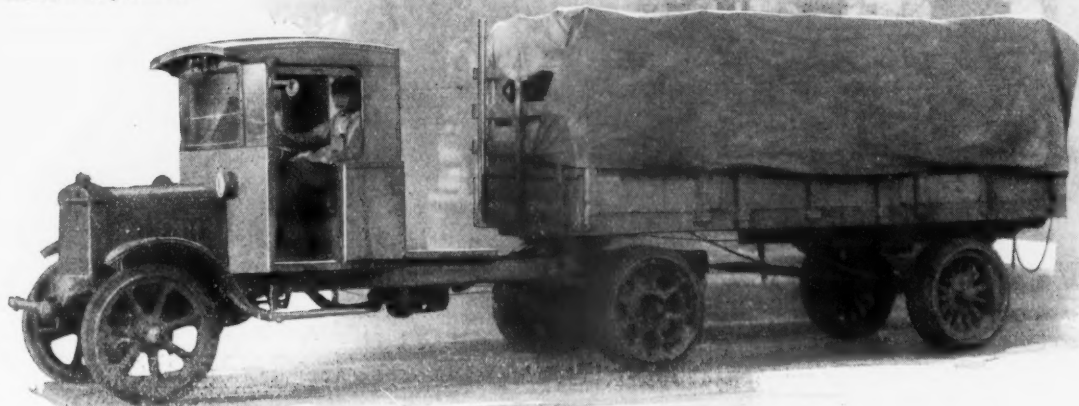


**CLARK
BEVEL AXLE**
B501 with Spring
Pad Capacity of
5000 lbs.

We also make Electric Furnace Steel Automotive Castings; all our Steel is "Bottom Poured"

40,000 Miles

G. H. BOCKHORST, who operates a three-ton SERVICE on one of these runs for the Michigan Motor Freight, says: "Not one moment lost—high speed continually—40,000 miles in 18 months—a record to be proud of."



Profitable Inter-City Freight Lines Use Service Trucks

SERVICE truckability is proven daily by the SERVICE units handling inter-city freight for the Michigan Motor Freight Lines.

This corporation contracts with the shipper to handle freight in and out of Detroit covering a radius of 100 miles. Tractors with semi-trailer equipment as well as long wheelbase, heavy-duty SERVICE trucks which haul an additional trailer are used. These trucks are operated by their owners, who are under contract with the Michigan Motor Freight Lines.

Freight is handled on the regular railroad rates plus pick-up and delivery charge. Night trips are made between cities, making delivery possible at the beginning of the business day.

Inter-city freight handling by motor trucks is growing and SERVICE trucks have a record of dependable performance in this line—another sales opportunity for the SERVICE distributor.

Your territory may be open. Investigate the advantages of the SERVICE franchise.

SERVICE MOTORS, INC., WABASH, INDIANA



Service

MOTOR TRUCKS

Important new sales features

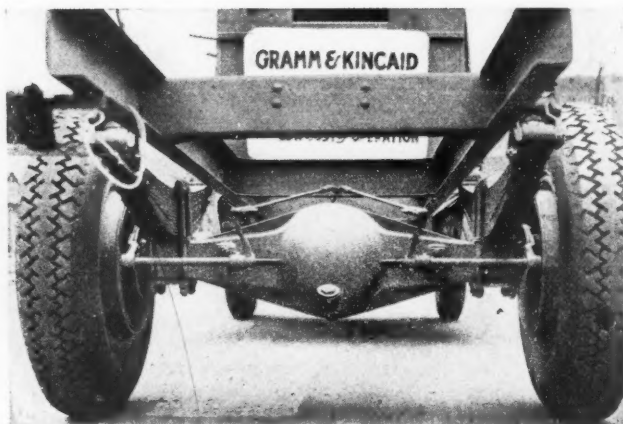
New Gramm designed Interchangeable truck units, mount either four or six cylinder motor. Standardized parts simplify service, cut operating costs 25%. New Gramm shock cushioned motor mounting. New Self-Adjusting Compound Springs. Less dead weight, more pay load. **PRICE GREATLY REDUCED. Write!**

A quarter of a century's truck building experience backs the Gramm-Kincaid Motor Truck. Experience. Capital. Sound merchandising policies. You could not ask for more than we build in the Gramm & Kincaid, we could not afford to give less.

Standardized! Six capacities—1½, 2, 2½, 3, 4, 5 tons—also a special van chassis. Trucks mount either four or six cylinder motors. All parts of equal rating interchangeable. Simple. Clean. Accessible. Well balanced. Every part selected from an engineer's viewpoint.

Resilient Construction

No other truck has the logical, timely, motor mounting now a part of this truck. It is a combination of springs and rubber shoes. Gives longer motor life. Fewer repairs.



No other truck has compound springs; automatically adjusting themselves to road, load and speed conditions. Every leaf Chrome Vanadium steel. Made wider and thinner. Passenger car steering ease. Positive, quicker control.

Spiral helical drive on the 1½ and 2 ton jobs. Double reduction drive

on the 2½ ton job. All gears and bearings operate in a bath of oil.

Ask Your Banker

Bankers will extend the limit on the Gramm & Kincaid Truck. They know there is **HIGHER VALUE PER DOLLAR INVESTED**. Write for complete details of franchise. Investigate! **GRAMM & KINCAID MOTORS, INC., LIMA, OHIO.**

Gramm & Kincaid Motor Trucks

America's Greatest Truck Dollar Value

Members Motor Truck Industries, Inc., of America

THE COMMERCIAL CAR JOURNAL

Entered as second-class matter at the Post Office at Philadelphia, Pa.,
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TABLE OF CONTENTS

LEADING ARTICLES

Are You an Opportunist?	7
Relation of Bus to Motor Truck Industry	9
Monoxide Eliminated	10
Abolishes Salesrooms But Sells More Trucks	11
Why Uncle Sam Considers Replacement	12
Provides Buffet Service and Saves 2 Hours	13
\$110,065 Worth of Business in Two Months	14
Why Good Salesmen Quit	15
Pictorial Pages	16
Travels 1400 Miles in Six Days	18
Costs as a Sales Approach	19
Bus Marketing Requires Special Knowledge	21
Cartoons	22
Hannum Steering Gear	28
Water Cooling Capacities	30
Program N. S. P. A.	54
Oregon Tax Issue	54
Des Moines Bus Service	55
Dodge Financing Details	55
Detroit Bus Show	56
Electrical Exposition	56
Improved Roads to be Studied	57
51 Railroads Uses Buses to Date	57
Operators Confer on Bus Operation	58
Automotive Interests Combine in Oregon	58
Court Protects Taxi Color Scheme	60

DEPARTMENTS

Advertisers' Index	116
Bus Table	44
Coming Events	54
Commercial Car Specifications	33
Editorial	53
News of the Trade	54
Replacement Table	47

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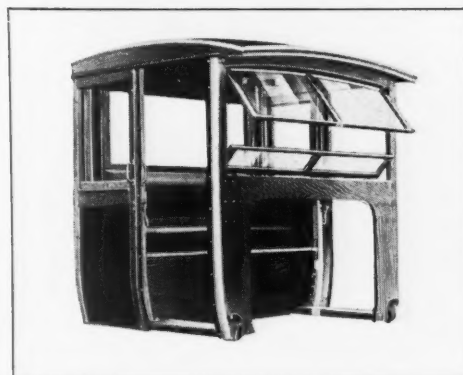
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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

RAIN OR SHINE CABS



Something to Get Behind

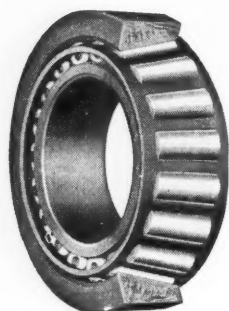
"The open season" for selling cabs is now at hand. Cab selling is extremely easy when you put the purchase on a money making basis. Show the truck owner that he can keep his trucks going in bad weather only by protecting the driver with a cab. Getting as many trips a day during winter weather as well as summer is every truck protector's problem. Nothing will solve this problem easier than a good cab.

Truck dealers are finding that selling Rain or Shine Cabs is far easier than they thought before they started. You, too, will find this. We have figures to prove that our sales plan is a winner. Let us mail them to you.

General Woodwork Corp.
Cincinnati, Ohio



Not far from Unanimous



During 1924 there were 375,396 trucks produced. 349,614 of them were Timken-equipped—48 makes of Timken-equipped trucks out of a total of 53.

During 1924, of all the buses purchased by electric railways, 75% were Timken-equipped.

By far the greatest part of the business in commercial vehicles is done by manufacturers using Timkens, and by their dealers.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

TIMKEN

Tapered

ROLLER BEARINGS



New Departure Ball Bearings

YOU never have to replace the jewels in your watch—friction is so reduced and the jewels are so hard and enduring.

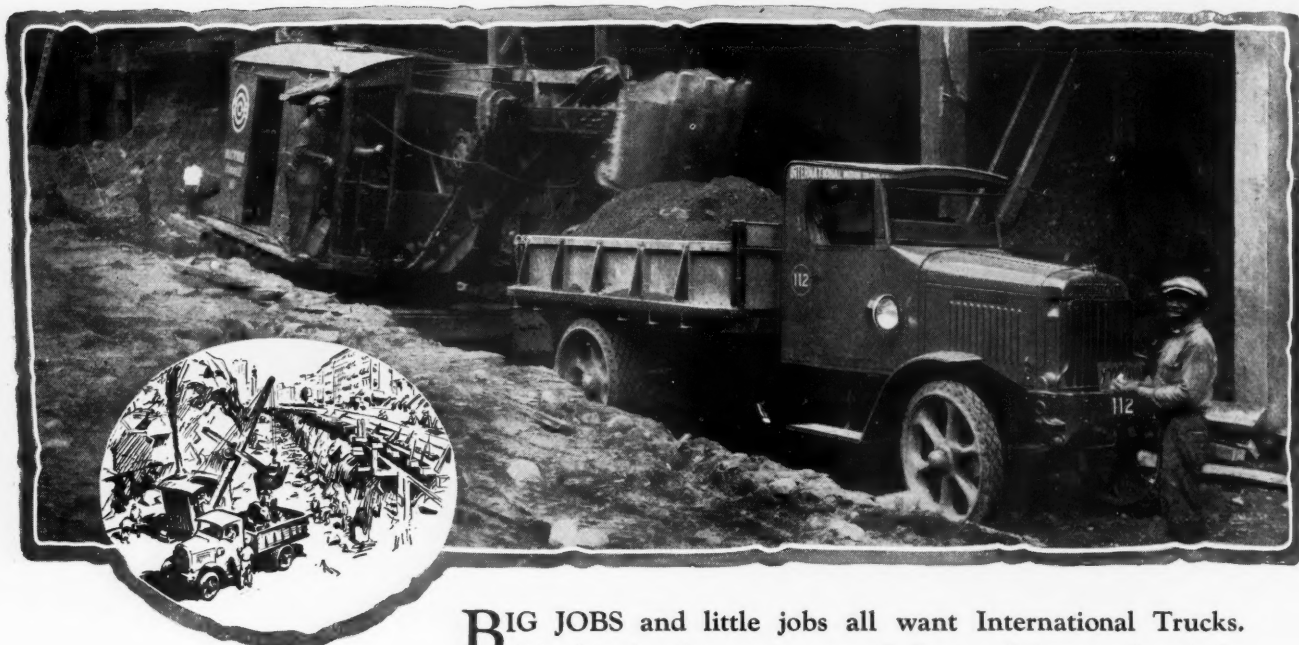
For that same reason, the bus, truck or passenger car which is "full-jeweled," completely equipped with New Departure Ball Bearings, is ideal.

New Departures do not *wear in* to require adjustment nor *wear out* to need replacement. They permit permanently aligned wheels as well as gears and pinions. Correct assembly, originally simple, is fixedly maintained. Gears once properly meshed retain their silent setting.

Ask for folder "What Jewels Are to a Watch, Ball Bearings Are to a Motor Car."

THE NEW DEPARTURE MANUFACTURING COMPANY
Detroit Bristol, Connecticut Chicago

Outsell Because They Excel



International Harvester Trucks

in the
**New York
Subway**

BIG JOBS and little jobs all want International Trucks. That's why there are several fleets of Internationals in the New York subways, hauling the celebrated trap-rock and granite of Manhattan out from under the feet of New Yorkers. Here, on one of the biggest jobs in America, where the reserve supply of stamina and dependability gets a thorough testing, International Trucks fill the bill month in month out. Exclusive features—removable cylinders, ball-bearing crankshaft, auxiliary springs, steer-easy steering gear, and many others—all prove their worth in work like this.

In any town, the man with the contract to sell International Trucks is headed for big sales and big prosperity. They are popular in every kind of business and there are sizes to meet every man's exact needs. Sizes—2000-lb. Speed Truck to 10,000-lb. (max. cap.) Heavy-Duty Truck. Who holds the contract for your region? If it is open territory it will pay you to write us for details.

INTERNATIONAL HARVESTER COMPANY
606 S. Michigan Ave. of America Chicago, Ill.
[Incorporated]



The Commercial Car Journal

VOLUME XXX

PHILADELPHIA, NOVEMBER 15, 1925

NUMBER 3

Are You an Opportunist?

How a Truck Dealer Saw A TREASURE ISLAND In a Strip of Sand

Solving a large-sized transportation problem for a group of business men, selling them the idea of truck transportation, finding a contractor to do the work, and selling trucks to sub-contractors is the achievement of Royal Bros., truck dealers in Atlantic City, N. J.

SALE of thirty-seven 5-ton White trucks equipped with 5.5-yard dump bodies shows clearly that the proposition was no small one.

The selling of truck transportation in the first place was the important thing. Failure here and the transaction would have died. The sale of the trucks afterward was a natural sequence. It was dependent upon the decision to use trucks, rather than other form of transportation. Everything hinged on the truck transportation idea, which had to be and was sold.

The development of Brigantine, an island adjoining Atlantic City to the north, furnished Paul Royal the opportunity to put over this truck transportation plan in a big way.

A group of Atlantic City business men had undertaken the development of Brigantine. This resort flourished in a small way until about

twenty-five years ago. Transportation was furnished by a branch railroad connecting with the main line running to Atlantic City at a point twelve miles inland. A winter storm washed out the railroad "fill" across the meadows separating Brigantine from the mainland. It was not repaired and, deprived of transportation, Brigantine practically ceased to exist.

Homes were abandoned, hotels vacated and the entire section was let to the mercy of the elements. Grass and underbrush soon covered the streets and concealed the trolley tracks. Civilization just stopped and desolation set in. On the beach, which is in plain sight of the crowds in At-

lantic City a few fishermen surf-casting seemed to be the only ones enjoying the natural advantages of this island, which is similar to the one on which Atlantic City is built.

This condition existed for some twenty-five years until two years ago when Atlantic City interests decided to develop Brigantine. Transportation was the first problem. It was decided to take advantage of the excellent train service already available in Atlantic City and to link Brigantine with Atlantic City by a wide boulevard and a bridge over the channel separating the two resorts.

Work was started on the boulevard and bridge in January, 1924, and it was opened to the public early in the summer of 1925. Meanwhile preparations for building of a seashore city were projected. Twenty miles of streets to be graded and gravelled and forty miles of concrete sidewalks and curbs were required for the first section of the development.

1000 Cu. Yd. Per Day

That transportation of material was a real problem became evident at this time. The construction program demanded the placement of one thousand cubic yards of gravel per day. And other materials in like proportions. The officers of the development company were confronted with the question of how to move this material to Brigantine.

Barges could be employed. A narrow gauge railroad would do the job. It should be remembered that there was no standard gauge railroad running to Brigantine.

But how much would it cost? Lots were to be placed on sale, and the price



By James W. Cottrell



GEORGE GRIER

to be asked depended upon the cost of the improvements to be undertaken. The cost of a cubic yard of gravel delivered on the ground in Brigantine became the keynote of the whole problem. Did anyone know the cost of barge hauling? Narrow-gage railroad? Facts? untimorized facts, were wanted!

Enter Paul Royal, purveyor of motor transportation and its units. A few minutes' talk relative to trucks and then the problem was made known to him. How will the cost of hauling by trucks compare with hauling by barges? How much will it cost to operate the trucks, how many loads per day, etc.?

Mr. Royal's answer was a question. Quickly sizing up the situation he saw the opportunity to sell first truck transportation, and later trucks.

"Would you like to have figures from a contractor for gravel delivered on the ground at Brigantine? So much a yard? And a price on the concrete sidewalks and curbs from a firm big enough to do the whole job and relieve you of the responsibility of taking care of the work?" asked Mr. Royal.

"Would they? That's just what we want," was the quick response.

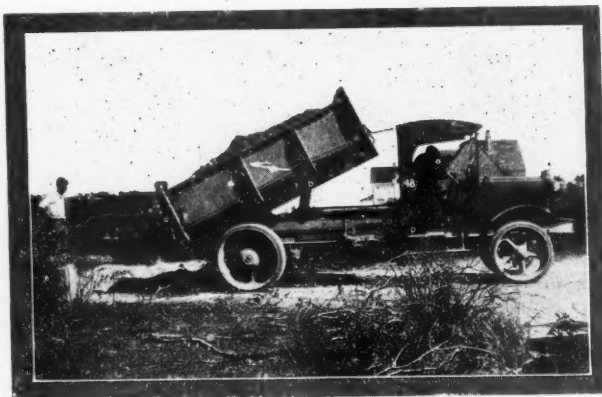
Mr. Royal left the conference with a responsibility and an opportunity, both of large magnitude.

He got in touch with a contracting firm in Trenton, some seventy-five miles away. Together they made a study of the hauling problem at Brigantine. Trucks were figured on to do the work. The grading and the cost of the concrete could easily be estimated. Estimates were prepared in regular contract form for the doing of the work.

At the next conference with the development company the figures were submitted. Instead of guess work actual bids for doing the work were available.



Making an island habitable



Dumping a load of gravel in Brigantine

As a result the officials of the Island Development Co., placed a contract with the Stryker Transportation and Construction Co., of Trenton, N. J., for \$450,000 worth of work.

Beset With Obstacles

The gravelling of 20 miles of streets and the laying of the 40 miles of concrete sidewalks and curbs started. White trucks did the hauling. The gravel was hauled from Absecon, N. J., on the mainland, a distance of about six miles from Brigantine in a straight line. The road distance, however, is about nine miles. But during the winter of 1924-25 the road from Absecon to Atlantic City was rebuilt and the trucks had to go by way of the Pleasantville Boulevard making the haul almost twice as long.

Sixty-seven trucks were used on the job. The work went forward with a rush. One thousand cubic yards of gravel were hauled every day. More than a mile of sidewalk and curb was laid in a week.

Heavy hauling by the many trucks soon pounded to pieces the gravel surfacing of the boulevard built between Brigantine and Atlantic City. The development company decided to pave the section of the road in Brigantine and so a concrete roadway 40 feet wide and three miles long was built.

An additional contract for gravelling streets and laying sidewalks and curbs in another section of Brigantine was given to the Stryker Construction Company. The amount of this contract was \$250,000 bringing the total of their work to \$700,000.

The Stryker company owned thirty White trucks before starting the contract. The extra thirty-seven used on the operation were hired. The extra thirty-seven hired trucks were those sold by Royal Brothers. With a year's steady work for a truck was not much of a gamble. Being in close touch with the general contractors, Mr. Royal could and did confine his sales to the number of trucks actually needed on the job.

A \$700,000 contract is a nice lot of business for any contractor; the sale of thirty-seven 5-ton dump trucks is not a bad year's business for a truck dealer in a seashore resort; the awarding of the second contract by the owners of the development to the first contractor indicated that they were more than satisfied with the solution of their transportation problem.

All of which goes to show that there are many ways of drumming up business if you are alert to local developments and their possible relationships to your business.



New Reo chair coach comfortably and attractively appointed

The chair coach, Reo's latest contribution to commercialized highway travel is elegant of body design, and appointments are peculiarly fitting for the kind of service it is intended to render. The new chair coach is mounted on a Model W bus chassis, with a Reo 50 horsepower, six-cylinder engine. The appointments of the interior are such as to promote physical comfort and mental relaxation—a very desirable attribute in a bus intended for use on long distance routes. Chair type seats; windows are broad, and fitted with attractive drapes; interior is finished in soothing colors; floor is covered with high-pile carpet; ample provision is made for lighting, heating and ventilation. Body length back of dash 215 in.; outside width 87½ in.; inside height 62 in.; seats 35 in.; aisle 12 in. Price plus tax \$6250 f. o. b.

What Does the BUS Mean to the Motor Truck Industry?



*The Whole World's Bus Riding
Get Aboard!*

By Martin J. Koitzsch

HAVE you ever stopped to think of what a remarkable industry you, as a manufacturer, distributor, dealer, salesman, service man, or fleet operator are a member?

Have you ever considered what a powerful influence the bus, which is an inseparable cornerstone of the motor truck industry, has exerted in bringing about a greater realization of the tremendous role being played by the truck in our daily lives? How the bus is interesting capital? How it is drawing into the commercial car industry executives of a higher calibre? And finally, how it is bringing about that desired contact which means success in any enterprise—100 per cent acceptance by the whole public?

The bus is dramatizing the whole commercial car industry. Its performance draws record audiences. They enjoy it and register their approval in applause. It's a success, an overwhelming success.

We, who are members of this marvelous industry, fail to appreciate the deep significance of the bus as a revolutionizing factor, both in the development of the motor truck industry to new and greater heights and in bringing about a complete change in our standard of living. We have lost our perspective through close association.

We, as we apply ourselves to our daily tasks, have a tendency to lose the broad picture. We notice, of course, but do we enthuse in proportion to the unprecedented change that is being wrought

27,719,916 Passenger increase in nine months for one company.

(the Omnibus Corporation)

7 Certificates issued daily by Ohio commission.

2,285 motor truck and bus certificates issued to date by Ohio.

10,000,000 passenger increase in Michigan.

(nine months)

115,000 miles per day traveled by Michigan buses today.

(nine months ago it was 65,000 m. p. d.)

2,800,000 road miles available to bus use.

3,001,000,000 passengers carried in the country in 1924.

\$300,000,000 estimated investment in bus plant and equipment.

7,500 companies operate buses.

60,000 total number of buses in operation.

31,000 buses operated by independents.

3,200 buses owned by electric railways.

20,000 buses owned by rural schools.

1,500 buses used for sightseeing.

in our mode of transportation as we should?

If you have lost this perspective, or have failed to recognize its existence, stop and reflect a moment. Think of what you sub-consciously observed from the very moment you stepped outside of

your home on your way to work this morning. Whether you live in California, Pennsylvania, Maine or Florida, the subject is the same. It's the bus. Whether you used it or not, you saw the bus. You saw many buses. They were carrying the usual morning multitude to its daily work. In many cases the buses were filled beyond their capacities. Public demand for still greater bus accommodation is obvious.

A glance through any daily newspaper will disclose numerous items and advertisements on bus tours, new transportation companies, new franchises, new routes, co-ordinated bus service, state-wide service, political influence, governmental intervention, scrapping of tracks by traction companies to be replaced by buses, etc.

In trade papers the marvelous bus growth again manifests itself in items concerning bus enterprise over the entire breadth of the country. Only the major items are discussed in these mediums. Local items, while big in their respective localities, are too numerous for complete publication. They would require three or four volumes monthly.

Yes, a little reflection will do the trick. One will soon realize what a deep mark the bus is registering in the minds of the

American public.

Contemplation of the progress achieved by so young an industrial unit as the motor bus is enough even to thrill our hard-fisted business men. No wonder capital is interested to the extent of investing millions of dollars! The record

transformation of public thought as brought about by the bus is bound to attract financial backing.

The bus has made possible that much-desired contact between the motor truck industry to the public. The bus has caused people to stop and think how powerful and influential the truck actually is to our economical existence.

Public recognition is a large element in the success of any industry. The passenger car industry, for example, was weened by it. Of course, the situation is somewhat different but it shows what a powerful factor public thought is and now the commercial car industry is getting its share.

The public is literally taken by its hand, and given a complete exposition of the utility and growing necessity of the motor truck, both as a medium of passenger and freight transportation

every time one of its members rides a bus. It is shown with a conviction greater than the reading of advertising copy or editorial articles could ever exert. The lesson is direct. The public rides, sees and hears first-hand. That is sufficient. It is convinced.

The significance of this contact factor is better appreciated when we consider that the average bus rider, while a layman insofar as knowledge of the motor truck industry and its activities are concerned, may be a capitalist, a lawyer or a small investor, or anyone who may later become a very important unit in this marvelous industry.

The motor truck is truly a remarkable industry, as is its general, the bus. Let's all get together and ride on the crest of its popularity and announce the fact of our proud membership to the world. Capitalize the enthusiasm it inspires.

Monoxide Eliminated and Its Heat Conserved

VARIOUS ideas have been advanced from time to time for the disposal of carbon monoxide, but until now nothing more practical has been suggested beyond shooting the exhaust vapor up into the air above the back of the car instead of down in the ground as now, or distilling or saturating the vapor into some other compound.

Recently, however, a new principle and device for the elimination of carbon monoxide has been announced, which experts who have seen it declare is a complete solution of the problem. This new device has been announced by Thompson Research, Incorporated, an Ohio corporation, with laboratories at Cleveland, and manufacturing plants at Cleveland and Detroit. These laboratories are headed by Mr. C. E. Thompson, formerly president of the Motor & Accessory Manufacturers Association, and developer of the non-burning Thompson Silcrome valve. Mr. Thompson, assisted by Mr. Bissell, his chief engineer, has now introduced what authorities have long been searching for—a process and device that licks carbon monoxide.

Elimination the Cure

"The real cure for carbon monoxide," says Mr. Thompson, "is to eliminate it, not merely divert it somewhere else. Many engineers have labored hard to find more efficient fuel mixtures for automobiles; and a lot of engineers, including our own staff have done much work on the problem of getting the mixture into the combustion chambers more efficiently and exploding it more completely. These studies have resulted in improvements in carburetion, intake manifold and in better valves capable of standing the greater heat punishment now put upon them.



C. E. Thompson

Head of Thompson Research, Inc.,
Cleveland, Ohio

"Our studies along this end of the vehicle have led us to the discovery which we believe will be of incalculable benefit to everyone who makes, uses or has any occasion to be around motor vehicles, a method whereby the deadly monoxide gas is consumed out of existence. Moreover, curiously enough, in developing our principle into a tangible device to dispose of carbon monoxide, the principle is found to create a source of useable heat derived from just what the motor loses which can be carried or piped anywhere in any vehicle from the smallest coupe to the largest bus to warm it thor-

oughly in winter months to any temperature desired.

"It is a well known fact that the operation of automotive vehicles is seldom or never at their theoretical best. Parts become worn, leakages occur, the motor becomes more or less foul, and thus at less than its best level of efficiency. Nevertheless, the driver is always trying to make his motor deliver its maximum power and in consequence most motorists run on mixtures that are considerably too rich and carburetors that are set for winter driving are seldom changed and made leaner for summer.

Exhaust Gases Combustible

"There are two consequences of this: First, as stated above, the expulsion of carbon monoxide is usually the greatest when the motor is developing its maximum power, which means most of the time; and, second, the rich mixture results in a passage through the exhaust pipe of a considerable amount of unburned fuel, that is, gas which is still combustible and which, if ignited under controlled conditions, is capable of creating a great volume of useable heat to be carried where the heat is wanted. In the Bureau of Mines investigation previously referred to, it was found that in the average motor vehicle, and this covers five and seven passenger cars and light and heavy trucks, combustion was only about 70 per cent complete. In other words, that about 30 per cent of the fuel mixture taken into the motor was passed out again through the exhaust pipe unused and, therefore, wasted.

"The revolutionary device which Thompson Research has announced is based upon these two facts, that carbon monoxide should be disposed of by elimination through consuming it and that there is a considerable unused fuel mixture passing through every vehicle exhaust pipe which can be utilized to heat the vehicle.

According to the description of Mr. Thompson and R. E. Bissell, chief engineer, the device looks like a special kind of muffler being attached to the exhaust pipe where the usual muffler ordinarily goes. It can be installed very readily on any kind of automotive vehicle, large or small.

The new device developed by Thompson Research, Incorporated, is, it is stated, the very thing for which bus operators have been waiting and searching. It will enable the public service corporations and the operators of privately owned bus lines to advertise to the public that their buses are in every way safe from the dreaded carbon monoxide and that for winter riding they are as comfortably heated as any steam or electric vehicle that travels on rails. This should result in boosting their total yearly business to much greater volume.

Budd Breaks Record

During September the Budd Wheel Company broke all records as to the number of wheels produced and the volume of sales realized.

Abolishes Salesrooms *But* Sells More Trucks

Salesmen Spend Their Time on the Road

By H. LIONEL WILLIAMS

G J. STARMANNS, of Sterling Supply and Service Co., at St. Louis, estimates that he lost more than \$50,000 by building the wrong kind of premises for the sale of trucks. This company now sells in the neighborhood of 200 trucks a year, about double what they were doing two years ago, with the same number of salesmen. As the premises were altered last year, and the truck showrooms abolished, it may perhaps be inferred that this change of plan has not materially affected the sales.

One of the accompanying photographs shows the original building, which had 1,600 square feet of floor space for display purposes, and 800 superficial feet for offices. The second picture shows the remodeled premises, which have no showroom beyond the space occupied by the vehicles on the garage floor, and a one-room office of less than 200 feet floor area.

The main floor of 120 feet by 200 feet is now used for the garaging of private automobiles and trucks, a business which well takes care of the overheads on the rest of the premises. Less labor is involved in caring for the business under the new arrangement and the salesmen spend 100 per cent of their time going out after the business, which, in Starmann's opinion, is the only way to sell trucks.

Show Windows Not Profitable

Show windows, he considers, may be useful from a general publicity point of view, but on the whole they do not justify the amount of floor space they involve. This particularly refers to premises located away from the main streets in the city centers. In their particular location, a couple of miles from the city hall, but on a street car line, much wider publicity is secured through the large number of automobile and truck



Above: Remodeled premises provides greater shop and garaging facilities.

Below: The original building, which was improperly designed for truck sales had too much office and display space

owners who call for gasoline and supplies than could be hoped for from a truck display window.

\$35,000 Parts Stock

The business is now based on service, backed by a \$35,000 stock of replacement units and spares, because the number of existing users is sufficiently large to form a potent advertising factor. This is backed up by an appreciable amount of advertising in the local newspapers, and the other activities of the company extraneous to the truck sales aid in establishing valuable contacts for that, the main line of business.

In his reorganization of the business methods, Starmann has placed his salesmen on a liberal commission basis in place of the former salary and commission arrangement, and is getting much better results. Straight commission, he finds, is a much better incentive to intensive effort, providing the commission is fixed at a worth-while figure. Too small, it is discouraging and the men are inclined to lose heart, with resultant heavy personnel turnover. A good salary and commission, on the other hand, tends toward spotty business, for the salesmen always slack off after a good run and the average falls.

Public Service of New Jersey Designs Own Bus

The New Jersey Public Service Corp. is manufacturing a bus of its own design which, if successful, will eventually supplant the fleet of over 900 buses now operated by the corporation in New Jersey.

This venture was instigated by the fact that maintenance of the fifty-eight makes of buses which the corporation has had in operation at various times has developed a shop personnel quite able to assemble complete buses and that it already has a well-equipped body building plant. The corporation believes that a bus chassis assembled from standard

units in its own shops at Irvington, near Newark, would not only be cheaper than any that could be bought, but also by designing the chassis in the light of the organization's operating experience it might be possible to produce another suitable for the operating and maintenance requirements of city bus service.

Even if the new bus does not prove satisfactory enough to adopt as standard the company expects to obtain considerable information through its use which will be of great value to bus manufacturers in helping them to design their product to meet service requirements. The experimental bus has a Buda type bus engine, Fuller clutch and transmission, two Spicer propeller shafts, Huck rear axle and Duplex speed governor.

Why Uncle Sam Considers the Replacement Problem

From Captain Ray M. Hare United States Army Spare Parts Office, 8th Corps Area

PROBABLY the biggest purchaser prospect for motor vehicles in the country today is the War Department of the Government. With some 40,000 automobiles on his hands that were purchased during the early days of the World War, Uncle Sam is faced with the problem of re-equipping his fighting forces with new transportation throughout, for the 8-year-old trucks and cars that were operated under war conditions are now ready for the junk pile.

\$175,000 for New Equipment

Funds were appropriated by Congress for the first quarter of the fiscal year, 1925, in the amount of \$50,000 for the purchase of new five-passenger touring cars on an exchange basis. Dodge Brothers cars, Model 1925, were selected and 51 old Dodges were turned in by the Army at an average allowance of \$50.00 each. At the same time Congress appropriated \$175,000 for the purchase of new cars for the first quarter of the fiscal year, 1926. The 1926 purchases were to involve no exchange of old vehicles. The cars under the exchange agreement were delivered to the Army in July, while the purchase from the 1923 appropriation was made in October.

Despite the fact that the motorized organizations of the Army were desperately in need of new transportation, an effort was made by the Motor Transport Division of the Quartermaster General's Office in Washington to hold up deliveries of the new cars until the latter part of 1926, to enable the Government to consolidate all appropriations for new 5-passenger vehicles and buy one model car. The purchase of vehicles in dribbles, it was pointed out, would complicate the parts replacement problem, which is the most important consideration in army vehicle maintenance.

When it is considered that during the last war, the United States Army had in operation 216 distinct types of motor vehicles, requiring 453,000 different kinds of spare parts to be taken into the field, some idea of the importance, from a military maintenance standpoint, of holding down the number of types and models of vehicles in the army may be realized.

My experience as Spare Parts Officer of the American Army of Occupation in Germany, where I had to supply parts for approximately 20 types of vehicles 3,000 miles away from the base of supplies, certainly converted me to the need for standardization of vehicle parts. German parts would not fit American Motor Vehicles, and when an army truck or car went out of commission on one of the roads along the Rhine, there was no convenient service station or parts dealer to which the driver could appeal. The army parts depot at Coblenz was the only source of supplies, and when the parts were not available there, which was often the case, the vehicle went on the dead line for an indefinite period.

Crippled Army Transport

Had the American Forces in Germany been equipped with five types of motor transportation instead of 20, the parts supply problem would have been reduced three-fourths and the limited cargo space on the army sea transports would have been sufficient to keep the Coblenz depot stocked with all the parts that were necessary.

Efforts are now being made by the engineering branch of the Quartermaster Corps at Camp Holabird, Maryland, to standardize the army's motor transport. Ten types have been tentatively agreed upon which will reduce the variety of spare parts with which army supply depots are stocked from the present num-

ber of approximately 50,000 to about 20,000 which includes 3,000 items of hand tools and machinery.

More Alert to Developments

An interesting feature of the recent purchase of new five-passenger cars, which is the first purchase of motor vehicles made by the army since the war, is the specification that the new cars be equipped with disc wheels and balloon tires. The Government has always been slow in adopting new features or refinements of any kind, the policy being to wait for years of experimenting in the commercial field before any changes are adopted. The engineering section of the Normoyle Depot is now experimenting with Duco paint for army vehicles, another example of the new attitude of the army to bring its transportation up abreast of the times. This opens the door of the country's user of motor transportation to manufacturers and distributors of new accessories and appliances who have heretofore been so persistently frowned upon by the army purchasing officers.

Segregates Truck and Car Department

The Wroten-Hundley Motor Company, of San Antonio, Texas, distributors and dealers for Dodge cars and Graham trucks, has started something new in this section. The company has segregated its truck and car departments. The truck department is now a separate institution and will be handled as such instead of as a side line as in the past. This is the first motor company to establish a separate department for its trucks. The display and sales rooms for the truck department is located at Eighth and Broadway streets. It is in charge of R. V. Covey and C. J. Boyer. The managers of the department have launched a sales campaign and the company is watching the experiments with much interest.

A new sales and service building is being built by the motor truck division of the Gotfredson Corporation to take care of Gotfredson owners in greater Detroit.



Emphasizing the Service Factor

Parts bins, with the message "Over 4000 bins of parts insure GMC truck users real service" constitute the main window display of the General Motors Truck Company at St. Louis.

Provides Buffet Service and Saves Two Hours

By MICHAEL J. PHILLIPS



With Its New Parlor Buffet Coaches Pickwick Reduces Its 455 Miles to Fourteen Hours

ON Monday morning, September 14th, the Pickwick Corporation put into operation between Los Angeles and San Francisco, two parlor-buffet coaches which are believed to be the last word in coach construction and comfort in the west. The huge cars, which are soon to be followed by similar models on other runs, five compartments—the driver's, the ladies' compartment, a lavatory and buffet, and a smoking compartment.

Because it is no longer necessary to stop for meals or other purposes on this de luxe run other than the taking on and discharging of passengers, two hours are cut from the schedule of the local stages. The parlor-buffet cars leave the terminal at seven o'clock in the morning and roll into their respective destinations fourteen hours later. They cover the coast route, and because this is "El Camino Real"—The King's Highway—over which the Franciscan padres trudged generations ago in their labor of love to civilize and Christianize California, the new schedule is called the Pickwick Franciscan Service.

Express Service

The Service is a limited one, as stops will be made only at Santa Barbara, Santa Maria, San Luis Obispo, Salinas and San Jose, less than a third of the towns through which it passes. The run is 455 miles in length.

The great new coaches, which have the trim lines of an ocean liner, were built in the shops of the Pickwick Corporation on designs evolved by Dwight Austin, chief designer and coach builder. Each will accommodate twenty-two passengers. The driver's compartment is separated from the passengers by a sliding glass partition and has a separate door for entrance.

The ladies' compartment, seating twelve people, with soft-cushioned reclining

arm-chairs, occupies the forward portion of the car. The smoking compartment and observation section are at the rear, with buffet and lavatory on opposite sides between the observation and ladies' section. The chairs in the passenger sections are near-beds which are capable of four adjustments. The most extreme is practically full-length reclining and permits the occupant to nap comfortably en route.

Every Facility

A drinking fountain with individual cups is part of the coach equipment. In the lavatory is a washbasin with plenty of towels, a huge mirror and a flushing toilet. A skilled chef is a member of the crew on every trip, and a touch of the convenient electric button brings him with his menu card. There is so little vibration and sidesway that meals can be served and eaten with fully as much comfort and ease as in a railway dining car.

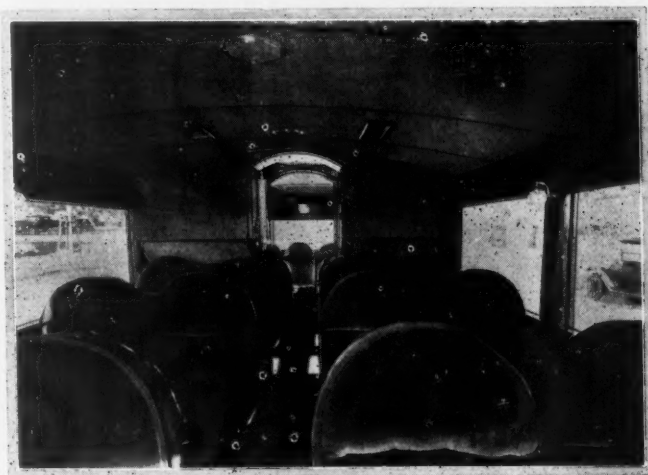
In the buffet, an electric toaster occupies a place over the window. Beneath it is a gas range, fueled from a tank beneath the car. Coffee is prepared in silvered urns, electrically operated; there is a container for ice cream, and a small but adequate refrigerator for perishable foods. Ingeniously tucked away all about the compartment are wall cupboards which hold a surprising amount of supplies. The kitchen is three

and a half feet square and just high enough for the steward to stand erect; nevertheless it is capable, of its own resources and his, of producing three full meals for a capacity load of passengers.

Distinctive Design

The cars are thirty-two feet over all. The lower part is painted gray, the upper blue, which is the Pickwick color scheme. Three doors, one to each compartment for the driver and passengers, open on the curb side. The design is streamline. The radiator is nicked and the fittings within and without are handsome and substantial.

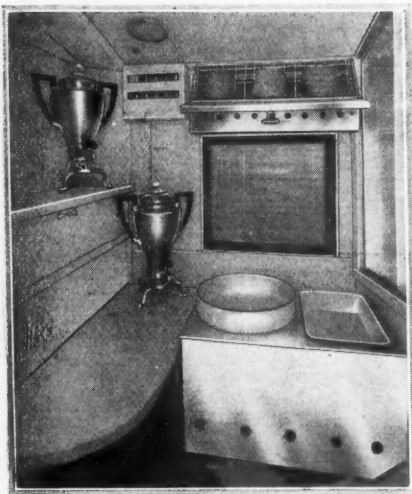
The Pickwick proposes to maintain its last year's record of 50,000,000 passenger miles without a fatal accident, for the new coaches are strongly and safely built. A series of fender lights outline the car at night. For the first time in motor history, it is declared, Gruess air springs have been applied to rear as well as front springs. This



Ladies' compartment provides 12 reclining arm-chairs

cuts down the sidesway and the vibration.

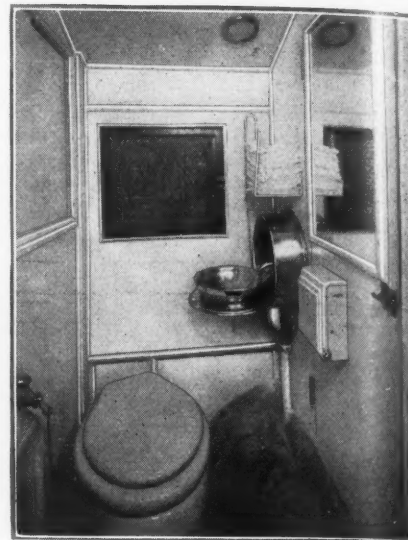
The brakes are extra large. The drums are five inches wide and eighteen inches in diameter. Each job has double rear wheels and oversize non-skid tires. In-



The resourceful chef can perform culinary miracles in this 3 1/2 ft. square kitchen

creased strength is added to the coaches by reinforcing the whole frame with heavy steel plates and by cross-bracing the chassis with channel-iron.

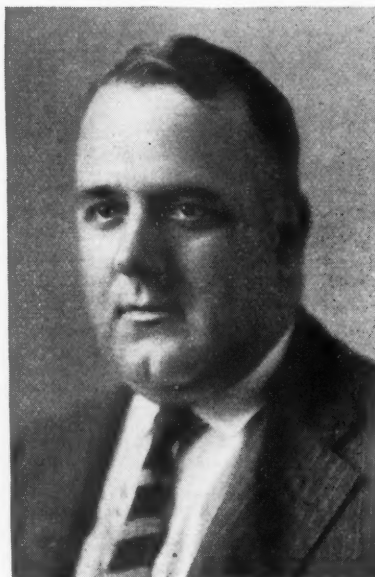
The Pickwick Corporation is enlarging its force by the hiring of one hundred skilled mechanics, who have started on the program of thirty more of the same type of coaches. Stock will be sold to the amount of \$1,000,000 to finance this and other expansions. Net earnings of the system, before taxes and depreciation were deducted, amounted last year to 23 per cent on outstanding common stock as of December 31st, 1924. The annual dividend on the preferred stock is only \$60,000. In 1924 the company had a capital of \$2,000,000, carried more than a million and a half passengers, and earned an operating profit of \$268,985. The business so far this year reveals that 1925 profits will be at least 25 per cent greater, as there is a corresponding expansion in patronage.



The lavatory is complete in every detail

\$110,069 Worth of Business in Two Months

This Was the Individual Selling Achievement of Mitchell Gaucher, Retail Salesman of the Detroit Branch of the Federal Motor Truck Company. He Won First Prize and Hung Up a New Record



Mitchell Gaucher

Sold 25 Federal trucks to 19 different concerns in two months

DURING June and July, the two months when sales are on the down hill, Mitchell Gaucher, retail salesman for the Detroit branch of the Federal Motor Truck Company, established the greatest individual selling record in the history of the company.

To do this he sold 25 Federal trucks ranging from one and seven and one-half tons to 19 different firms. To one firm, he sold four trucks, to two others he sold two. In all, the business that Mr. Gaucher turned into the branch during the two months amounted to \$110,069.82. Fifty per cent of the sales were made to old customers.

There was a national sales contest on to spur Mr. Gaucher towards first place and a fine sedan was given as a prize. But most of his sales came from hard work plus good follow-up work, so by the time the sales contest was on, Mr.

Gaucher was able to cash in on the work he had been doing.

Mr. Gaucher's territory in Detroit is not greatly populated by firms that use trucks, so in selling the number that was sold, credit must be given for real salesmanship. Many firms were visited that are now listed as live prospects, and it can be said that many more sales will result from the work done during those two months.

There is the same basis for Mr. Gaucher's sales ability that others possess, and that is hard work. But Mr. Gaucher goes beyond this. In his territory he

knows every firm that may need a truck in its business and knows from actual study what type of truck is best suited to his needs. Before calling on a prospect, he knows everything about the prospect's business and is able to talk his language.

Much experience as a salesman has taught him to read one's face and to know when to stop talking "shop" and to switch to the sporting page. To this he has added more by making a study of psychology. This study has not been from books but from conscientious efforts to solve his prospect's difficulty.

In his territory during the two and one-half years he has been selling Federal trucks, he has established a wide acquaintance, so wide that he is practically able to call every prospect in the territory by his first name. And there isn't a live prospect in his territory who doesn't know "Mike" Gaucher.

Perhaps one of the biggest things in his favor is that he is unassuming. Even today his friends in the Detroit branch do not know that he won first prize. It has been this quality that has added time and again to his sales.

Mr. Gaucher's version of his sales is brief and pointed. "More calls, intelligently conducted, mean more sales. I honestly try to put myself in the other fellow's shoes, too; I mean that, and study his problems from his side of the fence. If done sincerely and thoroughly it gives the salesman an entirely new slant on the proposition.

"And don't forget that when you know a prospect's problems you can talk to him a lot more intelligently and forcefully than you could without that specific knowledge. When you do that kind of business you are also doing another big job—making friends as well as sales and I get most of my prospects from the friends I have cultivated. So I say more calls of the right kind are sure to mean more sales. That's the only sales formula I've got and it certainly seems to have worked out pretty good for me in actual practice."

Why Do Salesmen Quit?

EVERYTHING is rosy with the dealer when his selling organization is humming along in top-notch fashion. But somehow the rosy hue, champagne-like, takes on a gray color whenever that same organization gets a bump.

Then we are button-holed by the dealer, propped in an arm-chair, and subjected to the same old, exasperating lament, "Just when I'm about to compliment myself on my good fortune in getting a good selling force together, Whang! out go a couple of my new and most promising salesmen."

We have exhausted all our sympathy for some dealers who can't keep their organizations intact. Year after year, we have explained, instructed and threatened as to the cause of the unreasonable turnover in the retail sales organization. Our efforts have been in vain, the disease still exists and we refuse to be disturbed by it any longer. Our palliatives have been accepted and shelved. We refuse to furnish any more material for the shelf.

Dealer's Fault

It's the dealer's own funeral; he refused, first, to recognize the law of equitable compensation, and secondly and equally discreditably to accept sound advice, helpfully offered.

To demonstrate with a true incident, which occurred in New York City the other day and to which our attention was flatly brought into contact with the still very much alive nigger in the woodpile, glance over the following synopsis of a telephone conversation. As a prelude to the dialogue, the main character is an able young salesman, college graduate, about 28 years of age, new in truck merchandising and with a commendable number of hard sales to his credit.

"Why do you wish to sever your relations with the Blank Company?"

"The policy of the company and its management is such that I can not earn a livelihood."

"How are you paid?"

"Twenty-five dollars a week and commission."

"I should think that with any kind of sales ability you should be able to make out handsomely under that arrangement."

"So you think. But here's the rub. I am required to spend all my time wading through a prospect list that was compiled when Mr. Selden first started in the business. If I happen to find three out of every ten addresses correct I'm lucky. And even then the concerns are generally non-prospects, undesirables, or otherwise unworthy. Plainly, the list consists of a lot of driftwood, which I cannot cut through fast enough to make a fair living."

"Is there any other reason?"

Can You Blame Him?

"Yes, as an example let me cite you the details of a sale I consummated the other day. Being hard strapped for extra cash, I determined to step out and do some additional soliciting, over and above following through the prospect list to which my entire time should really be subjected. It meant extra work and a lot of hustling. To make a long story short I finally got the signature on the dotted line, as a result of much research work and analyzing. The deal involved three trucks and on an excellent payment basis. What was my compensation for my effort? A small percentage of another salesman's commission, which was grudgingly conceded. It so happened that the sale was made in another salesman's territory, a favorite. I had trespassed! What I want is co-operation and I haven't been getting it."

"What conditions would you wish to work under?"

"With an organization that has genuine system, one which maintains a real live prospect file, and a company that will not burden me with a lot of unes-

sential detail, that ought to be handled by the office force."

"If I can assure you of such an organization, under what basis would you like to join my organization?"

"Of course, I understand, that with a change I would lose some of my speed which I would not expect you to share. Therefore I'd suggest a short probationary period at \$25 a week and commission, without non-essential burdens and with the understanding that upon proof of my ability I have the right to step out after the big stuff."

"How do I know that after a few months' period, you won't leave me as you leave the Blank company now?"

It's Up to the Dealer

"Knowing the conditions surrounding my present connection, I think you are in a better position to judge whether I will stay or not. Besides, you know your own organization and whether it is such to induce a producer to stay. I only want to be met half way and do not wish to be played against favorites."

"Fine, stop in my office today at three."

Summary: Where is the fault?

1. With the original dealer,
2. With the salesman or
3. With the new dealer?

Mexico Interested in Buses

The Automotive Division of the Department of Commerce learns through consular advices that one of the larger Mexican cities is contemplating purchase of between 40 and 50 motor buses. These buses are to be used in the place of street railway lines which are now being removed. Interested manufacturers may secure further information by communicating with the Automotive Division.





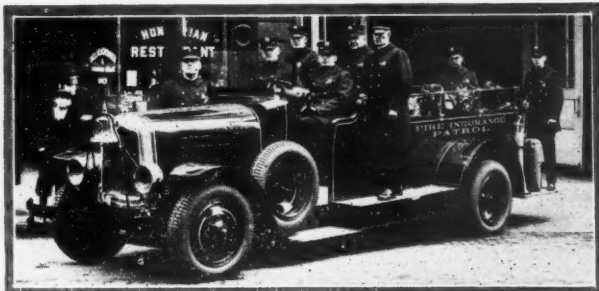
Warford equipped Fords prove themselves in lumber service

These trucks owned by the Cornell Woods Products Co., Cornell, Wis., are equipped with Warford auxiliary transmissions and provide the increased power necessary for service over rough roads.



Sullivan's delivery at Milwaukee will contract to move anything

The illustration shows 2 ditch digging machines being hauled by a 20-ton Highway trailer and a model 68D, 5-ton Garford truck.



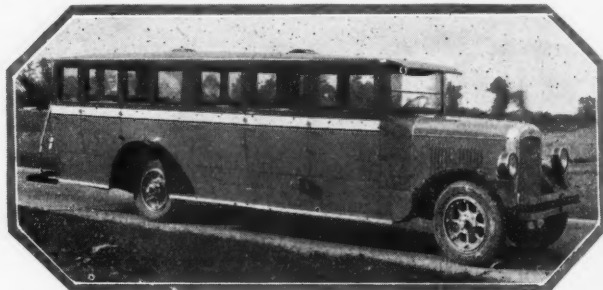
This Yellow coach "Fire Fighter" averages 11 calls per day

The fighter was put in the service of the Fire Insurance Patrol, Chicago division, about eight months ago. Its greatest record was 42 alarms in 24 hours.



Hoisting a 1000-gallon oil tank weighing 1500 lbs. by a truck crane

The International Motor Co. recently developed this equipment mounted on a 2 1/4-ton Mack which is adaptable for many uses. Every power unit essential for this type of service is provided.



Designed for special passenger comfort and easy riding

This bus, consisting of a McKay built coach and a Ruggles chassis, is known as the Sweet Brier bus and operates from Lynchburg, Va. The body which is built very low is designed with the same inside height as a regular sedan and is built clear down to the running-board, giving a pleasing line effect. Capacity, 24 passengers.



American manufacturers hold first place for producing vehicles possessing endurance in Russian automotive trials. American made motor vehicles were credited as being best adapted to conditions of the Soviet union. The illustration shows Soviet officials inspecting American made vehicles.

Commercial Car Journal

Pictorial News Review

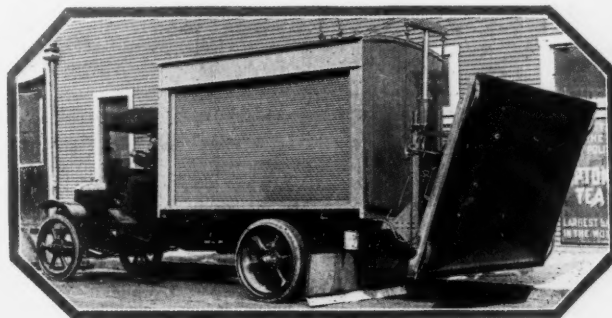


A body that is guaranteed to make you feel thirsty
This body, which was built by the Mercury Body Corp. for light deliveries, also attracts attention. It is designed to create a desire to quench thirst. Increased sales are attributed direct to this novel method of advertising.

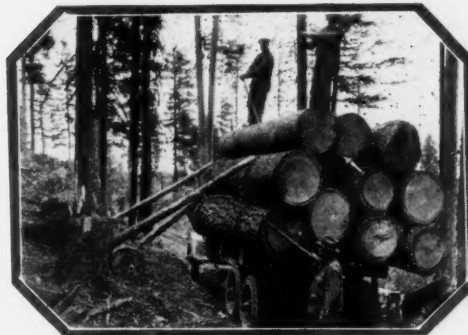


Special tank truck supplies gasoline to planes in San Francisco

The tanker, which is owned by the government, carries 300 gallons and keeps the planes at Crissy Field supplied. The illustration shows the truck delivering gas to the Boeing plane P. B. 1 of the San Francisco-Hawaii Non-Stop Fleet.

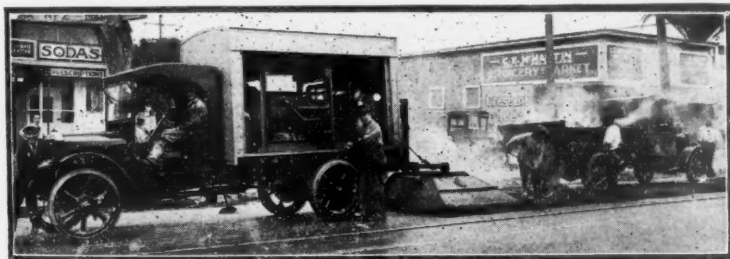


Asphalt heater used by city of Los Angeles



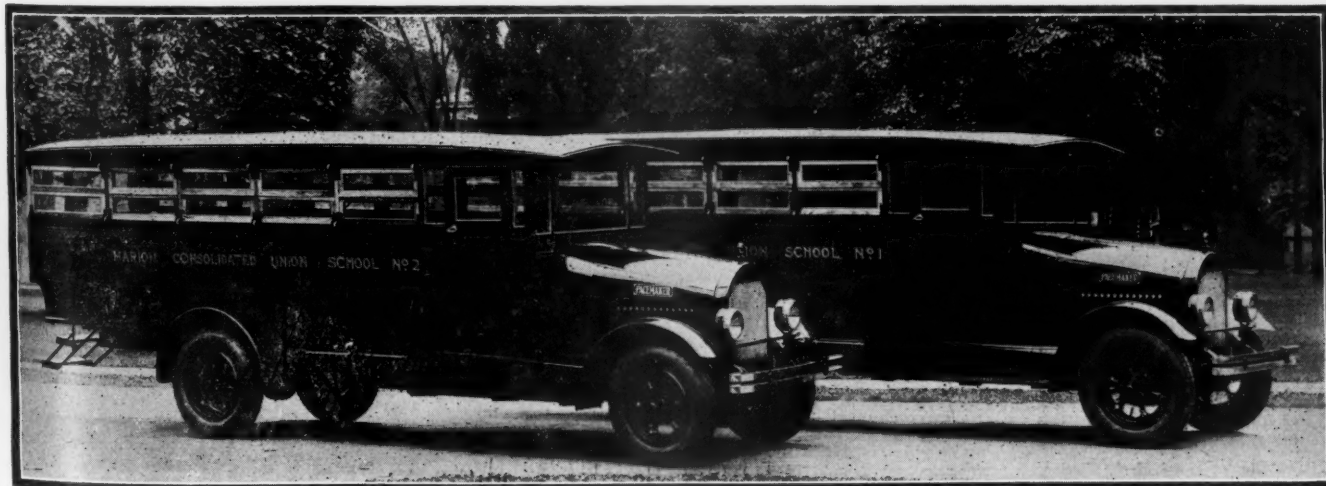
Trucks are used to transport lumber direct from the forests

Lumber-jacks devise various ingenious methods for mounting logs. The above method in conjunction with a winch has been found most satisfactory.



Another view of the asphalt heaters used by Los Angeles

This equipment serves a double purpose. It heats the asphalt, and the air compressor mounted on the chassis furnishes compressed air which operates chisels for breaking up the asphalt.

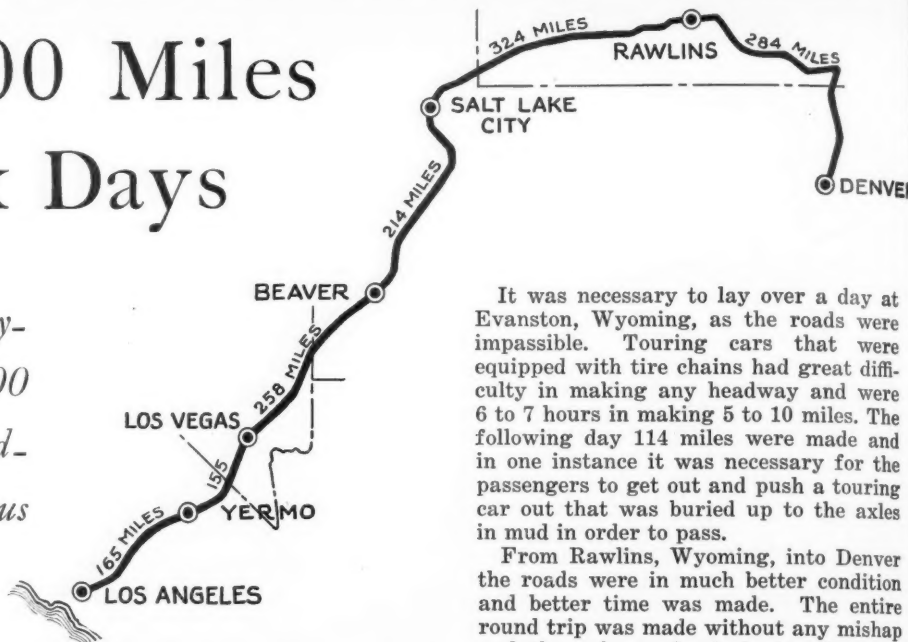


Making school hours the thing to be looked forward to by our rural youth

These Selden Pacemaker school buses were recently delivered to the Marion Consolidated Union School, Marion, N. Y. The bodies have capacities of from 30 to 38 children, beside the driver.

Travels 1400 Miles in Six Days

Transportation of Twenty-six Passengers and 1000 lbs. Baggage Over Adverse Highways Latest Bus Achievement



WHAT is said to be the largest number of passengers ever to travel in a single motor vehicle from Denver, Colorado, to Los Angeles composed a party that arrived in Los Angeles a few days ago. There were twenty-six passengers including eleven women and the group covered more than 1400 miles in six days.

The trip was made under the auspices of the Motor Travel Bureau of Denver. The bus used, was a Mack, the property of the Greeley Transportation Company of Greeley, Colorado. F. E. James and his son, T. L. James, of the Transportation Company, and W. E. Weichlein, bus service representative of the central division of the Mack-International Motor Truck Corp., accompanied the tourists. The run to Los Angeles was made without any unusual incidents, despite the fact that it was the first vehicle of the type to make the trip from Denver and the operators had no previous experience on the roads.

Climbs 42 Mile Grade

From Denver the bus was driven by way of Cheyenne to Rawlins, Wyoming, a distance of 284 miles, the first day. It was necessary to negotiate the famous Sherman Hill, a grade 42 miles long. Road conditions were fair and the passengers enjoyed the acme of comfort as the bus was of the parlor car type and all had individual seats.

The second day's run was from Rawlins to Salt Lake City, a distance of 324 miles. This part of the road led over the Continental Divide and through Echo Canyon. There were many mountainous grades from five to fifteen miles long. The roads were badly rutted and at one point a detour of 70 miles had to be made. The third day brought the party from Salt Lake to Beaver, Utah, over the Zion road. Conditions were good for the first 100 miles out of Salt Lake, but the remaining 114 miles were bad.

Numerous mountain passes, hairpin turns and rough roads were experienced

on the fourth day, which brought the tourists to Las Vegas, Nevada. This run was 258 miles and near St. George on mountain roads the only place was encountered where the bus had to back to make turns. These turns were very sharp. The fifth day less mileage was made than any other. The bus was driven from Las Vegas to Yermo across the desert over a single rutted road. The only variation came in crossing the dry lakes.

142 Miles With One Flat

The bus argonauts devoted the sixth day to coming from Yermo to Los Angeles, a distance of 165 miles. Of these, 142 miles were covered with only one tire on one of the rear wheels, thereby proving the advantage of dual tire equipment in cases of emergency. The hot desert sands and deep ruts accounted for the tire trouble. In addition to the 26 passengers the bus carried approximately 1000 pounds of baggage, supplies and equipment.

The return trip from Los Angeles to Denver was made over the same route except from Rawlins, Wyoming, to Denver going via Fort Collins instead of Cheyenne. The road conditions on the return trip were much worse than on the way out on account of the heavy rain storms, which seemed to be general from the desert to Rawlins, Wyoming, causing washouts and deep ruts.

It was necessary to lay over a day at Evanston, Wyoming, as the roads were impassible. Touring cars that were equipped with tire chains had great difficulty in making any headway and were 6 to 7 hours in making 5 to 10 miles. The following day 114 miles were made and in one instance it was necessary for the passengers to get out and push a touring car out that was buried up to the axles in mud in order to pass.

From Rawlins, Wyoming, into Denver the roads were in much better condition and better time was made. The entire round trip was made without any mishap and the only mechanical attention that was given the bus was oiling and greasing and replacement of a loose fan belt, and an average of 8 miles per gallon was made on gasoline and 1 quart of oil to 160 miles.

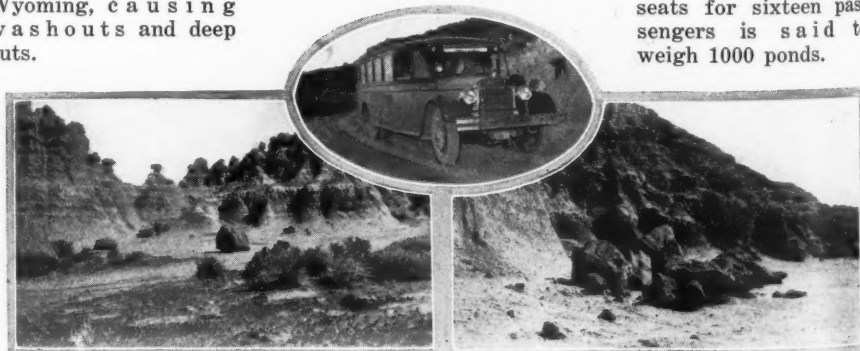
Southern Countries Asked to Good Roads Convention

That the next annual Good Roads Convention and exposition of the American Road Builders' Association to be held in Chicago, January 11-15, 1926, inclusive, will be an international and especially a Pan-American affair, is indicated by the fact that all the Central and South American countries are being asked to send delegates. Last year 16,000 registered delegates, many of them unofficial ones from South America, attended the convention.

The Kentucky Wagon Manufacturing Co., Louisville, Ky., has taken over manufacture and sale of the Economy motor coach, designed by R. M. Hawn, of Cleveland, Ohio, in both sedan and street car types.

This coach is featured by the fact that the body projects a short distance beyond the front wheels, while it ends just back of the rear wheels, like a sedan, without overhang. Driver's seat and control are forward of the engine.

The entire body with seats for sixteen passengers is said to weigh 1000 pounds.



Beautiful to view but quite a test for the modern coach

Costs as a Sales Approach

G. B. Loomis, General Manager of the Electric Vehicle
Co. Trains His Salesmen to Approach Prospects
From Money Saving Standpoint

Developing Electric Salesmen

By C. P. Shattuck*

THE development of highly trained salesmen capable of meeting the executives of big concerns and closing a contract involving many thousands of dollars, is a problem that confronts every sales manager in the truck business. The percentage of existing star salesmen is very small, but that they can be developed is the contention of G. B. Loomis, treasurer and general manager of the Electric Vehicle Co., Inc., Springfield, Mass., which concern has been merchandising electric vehicle transportation since September, 1912.

Knows What is Wanted

Mr. Loomis is also a technical man and fourteen continuous years in the electric truck field plus his thorough knowledge of the gasoline vehicle, has given him some decided viewpoints on the subject of developing salesmen.

Here's how Loomis does it. Contrary to the conventional rule he does not select young men. Middle-aged men are

*Staff, Society for Electrical Development.

chosen because of their stability and ability to meet the business executive. In other words, Mr. Loomis believes that the middle-aged man is seasoned and if properly grounded in his new vocation, will accomplish greater net results than the young man.

He prefers the man without a knowledge of gasoline or electric trucks because he is free from prejudice. He is first instructed on the fundamentals of the electric vehicle by supplying him with the proper books to study. Then follows instruction direct from Mr. Loomis, after which the embryo salesman is taught to operate an electric as it should be driven.

Next follows a reasonable length of time in the service station observing the practical side of service. During all this instruction the candidate is steered clear of technical information, for Mr. Loomis contends that the salesman who becomes involved in technical discussions with the prospect simply builds sales resistance. Furthermore, he states, that sales resistance is readily developed if the salesman is drawn into a discussion on comparisons between the electric and any other form of mobile transportation. How this subject is handled is explained later in this article.

Grounded in Fundamentals

The salesman is now ready to delve into cost figures; to study the various factors responsible for the cost per package or ton mile in various industries and under varying conditions. Throughout the training process the salesman is grounded in the fundamentals of selling low cost transportation and the vital need of proving his case to the man who signs the contract.

When the salesman makes his call on the prospect he sells him the thought that he is there to improve the present system,

to co-operate with the prospect and to reduce his cost per package or ton mile. The salesman is not assertive. He does not make the bold statement that he can nor is he confident he will. But—he is willing to analyze conditions and make suggestions for improvement if possible. If the prospect is not interested certain literature is left. This deals with the economies obtained by large users of electrics and other equally interesting data. After a definite period another call is made and the same offer is repeated. The feature of the approach is that, no attempt is made to sell any vehicle.

Resourcefulness

If the prospect turns down the salesman another sales approach is made but in a different manner. The salesman enters by the back door, so to speak. A visit is made to the stable or garage and acquaintance is made with its head. General knowledge is gleaned of the delivery system, the units, routes, etc. The salesman is a good mixer and knows how to exact this information indirectly. With the data thus secured, plus information he has in the home office, the salesman makes up a set of approximate cost figures of the horses or other units employed. It is a rough analysis but it supplies a working foundation and, invariable it is found that economies can be effected.

The salesman now calls again on the prospect and interests him in saving money as well as improving his delivery. Few business men will refuse to listen to a brief outline of a plan to effect economy. The prospect is then sold on the plan of permitting the salesman to make a transportation analysis with costs, with the unit employed and with an electric truck. No effort is made to fit an elec-

REPAIR DATA									
Material									
Quantity	Article	Unit	Cost	Price					
Meter No.									
Name	Odo.	No.							
Date									
Car	Battery	Chg. Volt	Rate						
A.H.C.	Voltage	Sungamo	Meter Reading						
Start	Finish	Amps.	Time on						
Sp. Gr.			" off						
			" on						
			" off						
Charge-Boost	K.W.H. @								
Flush	gal.	Labor	hrs.						
Collect									
Deliver									
Wash	lbs.	Labor	hrs.						
Grease									
Storage									
Repairs Ordered	Data on other side								
O.K.									

Daily card record for repair work

Car		Month of		Name	
Battery		Rate		Account No.	
Dist.	Odo.	Mi.	Rate	Cost	Dist.
1					1
2					2
3					3
4					4

Monthly cost sheet for cash unit

tric to a route where it is logical to use the gasoline truck. The electric is operated under the same given conditions as the horse or gas car in respect to the weight of load, packages, etc., stops, miles, hours, etc.

The data obtained is then compiled and checked against the cost figures of the units used by the prospect. It may be that he has no real cost-keeping system, and when this is the case the salesman analyzes and groups the figures under their respective heads, such as interest on investment, depreciation, operation, maintenance, etc. The figures are then laid before the prospect to show the saving possible and improvements that can be made in his delivery service.

If the concern has an engineer and he is brought into the picture, the salesman does not attempt to discuss design or other technical matters but since the company has a man qualified for the work and he is called in. This is done where special design is required. If the superintendent of transportation is brought into the picture he has already made the acquaintance of the salesman by the route analysis.

Must Consider Variables

Now costs are costs and figures are frequently misleading. Varying road conditions, grades, etc., will bring about different results. Then there is the human equation in cost figures. The Electric Vehicle Co. has been compiling cost figures on electrics in various industries and under various conditions for many years and is therefore in a position to present figures that can be substantiated.

The cost records maintained by the company extend, as has been previously stated, over a period of many years. The system was devised by Mr. Loomis and is a simple one. Six loose leaf sheets, 12 x 14 in., are employed for each vehicle garaged and serviced in the service station. Both sides of the sheet are used, each side providing a 31 days' record. A study of the headings on the sheet will show the details of the system and how costs are obtained with accuracy.

The data for the sheet is taken from the daily card record, also shown. One side is provided for all essential information and repairs ordered, and the other

side is for the material used in repair work. The data is transferred to the large sheet and thus a perfect picture is obtained of the vehicle over any given period, as both the sheets as well as the cards are kept on file. From a service station standpoint this data is extremely valuable since a complete analysis can be made of any cost involved. Equally important data is compiled on the battery. Thus the salesman has available facts which are invaluable. Mr. Loomis finds the method described most satisfactory and resultful. He is an enthusiastic booster for the electric vehicle and believes the electric truck industry will expand and come into its own as a unit of economical transportation in that service where the haul is short and the stops are many and that the electric will prove its low ultimate cost through its many satisfied users.

Bus Tire Price Situation

Prices of bus tires were advanced 15 per cent October 17 by the Goodyear Tire & Rubber Co. At the same time announcement was made that inner tubes and solid tires would be 20 per cent higher. Other tire manufacturers followed with similar increases. This is the fifth general tire price increase to be put into effect this year since the crude rubber market started to skyrocket.

Although rubber was selling higher than it is now at the time of the previous advance, July 18, the significant point is that most of the manufacturers have used up their stocks of low cost rubber. Tire prices were then based on rubber purchased at 55 and 60 cents a pound, although the spot market was \$1.20 a pound. From that figure rubber dropped to 70 cents, but subsequently rose to

\$1 again, where it has continued firm for several weeks.

Demand for tires is expected to be stimulated by the new price schedules, at least temporarily, but it is felt that eventually the effect of higher prices will be to slow up sales.

Even with the new increase, it is pointed out that tire prices are only slightly above the 1923 mark, and still below the 1920 level. The manufacturers have been giving the public the benefit of rubber purchased at lower prices, and have consistently held down the price of tires as long as the lower priced rubber held out.

Representatives of tire manufacturers who attended the American Electric Railway Association convention at Atlantic City were optimistic upon their return on the prospect of further expansion of bus lines by the railway companies. There will be closer co-operation in the future, it is stated, between the tire manufacturers and the bus divisions of the railways.

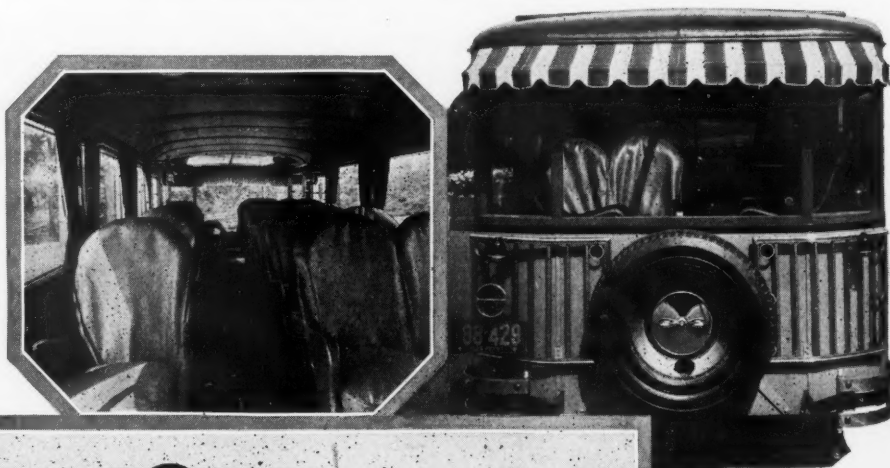
An important change just effected in the manufacture of bus tires will result in the diameters of casings being larger in the future. Bus operators and manufacturers have agreed that the large diameter tire gives the best service.

Ohio Bus Owners Decide

The Ohio Motor Bus Owners' Association has rejected an offer to affiliate with the American Automobile Association, and has voted to ally itself with the National Motor Bus Association instead.

Both decisions came yesterday at the closing session of the Buckeye organization's two-day conference at Cleveland, Ohio, attended by more than 100 bus owners and operators.

Views of Thompson's luxurious observation club car mounted on a Mack chassis



This 18-passenger, 81 in. observation club car, designed and manufactured by E. J. Thompson Company, Pittsburgh, Pa., is also made in 90 in. width, seating 22 passengers. The comfort afforded passengers is shown by the interior view, which gives a very good conception as to layout and appointments. Passengers are afforded a complete view in every direction.

Bus Marketing Requires Special Knowledge

How a Well-known Dealer Handles Bus Business

THAT the average truck salesman is not qualified to sell buses is the considered opinion of J. C. Kardell, vice-president of the Kardell Motor Car Co., St. Louis. Bus marketing requires a special knowledge of passenger transportation problems, according to this Reo distributor who has sold more complete Reo buses than any other dealer. For that reason he handles the bulk of the bus business himself, in connection with which he has introduced many innovations.

Operating on the principle that a successful bus owner means more business for the dealer, Kardell assists the operators in every way possible, both before and after the sale of the machines. His offices are advertised by the operators as headquarters for information as to bus routes, fares and schedules. As a result the night porter is kept busy answering telephone inquiries. By this means the services of the bus lines

are co-ordinated and the dealer maintains a constant contact with his clients, who, for the most part are located outside of the city into which they operate. In c i -

dentally the advertising the Kardell Co. gets through this scheme, and the contacts they establish with private car users, are of no little value.

Always on the lookout for likely bus routes, Kardell has in a number of cases been able to provide his customers with business for the machines they buy from him. Further than that he finds it profitable to help them get established by securing permits and assisting in the formation of their business generally.

Having thus made friends of his customers, Kardell sees that they are well cared for in the matter of maintenance. Service is of paramount importance in bus line operation, and for that reason arrangements have been made whereby the operators can get attention by expert mechanics at any hour of the day or night. These mechanics are not stationed overnight at the company's premises but they can be reached by telephone on application to the night porter. Supporting them is an adequate stock of spare units and parts.

Impartial Service

The smaller the operator, the more attention he needs, as a rule. The Kardell Co. therefore, keeps close track of the use that is made of their service department by these men. After the 30-days' free service period, a series of service letters are sent out, usually one a month. This direct-by-mail advertising has been found most effective both in the commercial and private vehicle ends of the business. The principal object of these letters and folders is to call attention to service details and help the user to get the utmost value from his investment. One series of folder-letters deals with parts of the chassis requiring attention periodically. The form this letter takes is shown by the illustration. On the first page is a personal letter, discussing the need for attention to some special part, in this case the differential. Inside this theme is enlarged upon in an attractive manner devoid of technicalities.

These service letters are in no small degree responsible for the fact that for the past three years the service department of the Kardell Motor Car Co. has shown an annual profit. Free service to new machines if of course charged to new vehicle sales, as is any loss that may occur on the sale of a used vehicle taken in trade. Occasional losses of this nature are of course unavoidable although during the past twelve months about 50 per cent of possible business has been turned down an account of excessive trade-in allowances called for by the prospect.

Kardell, believes that his business is no different from any other and to be successful must be conducted along proven lines.

A Quiet Rear Axle

It is not an uncommon experience for bus owners to go from shop to shop, from expert to expert, trying to have "a certain noise" stopped. The trouble is that some men do not know how to determine the exact cause of a noise — especially a gear noise — especially a gear noise. It may be a growl or a hum coming from the rear axle. Usually this noise is caused by neglect of lubrication or to a cracked gasket that has allowed the oil to leak out. The cure involves an adjustment of pinion and ring gear, which is the most delicate adjustment on the car. Even if the rear axle housing is properly supplied with oil, a gear noise may be heard if the differential or pinion adjustment is incorrect.

While transmission gears may produce a howl or growl, it is generally the rear axle that comes into the shop first for resetting of gears.

Kardell Motor Car Company
DISTRIBUTORS
3145 LOCUST BLVD., ST. LOUIS, MO.

Dear Sir:

There is one important part of your car to which you, and other car owners, give far too little attention.

That part is the differential.

Considering that this is a part made mainly of intricate gears, it functions wonderfully well for the little care that it gets. Differential gears that have been allowed to run dry, however, may result in flattened or broken teeth — and possibly a flattened rear axle. On the other hand, too much lubricant has been known to leak thru the axle rubbing on to the brakes with equally disastrous results.

A differential in need of expert care will give off a variety of warning noises — will listen for a grind in your rear axle — or better yet, arrange with us for a regular inspection.

Yours very truly,
KARDELL MOTOR CAR CO.

Pres.

Left: One of a series of service letters used by Kardell.

Below: Folders are used to call attention to special details.

Has Your Differential Been Recently Inspected ?

THE rear axle is the final receiver of the power of the engine. It's the axle that makes the wheels turn round. It is also the unit that does more work than any other for the little care that it needs. All the bus owner should do to the rear end is feed it oil, up to the required level. Anything more than that is a repair-shop job.

In every rear axle there is a driving pinion, a differential, and two axle shafts. The pinion is at the end of the propeller shaft and so receives its power only to

pass it to the differential which in turn divides it between the axle shafts which are attached to the wheels. The differential, besides acting as the driving unit for the wheels, also serves to change the wheel speeds when the car rounds a corner.

Being a unit mostly of gears, the rear end may produce noises. From the gentle hum of the properly adjusted pinion and ring gear (the large gear of the differential unit) to the grinding noise of dry gears, there are numerous intermediate noises. The cure of the unusual ones is a problem for a good shop. It is easy, if one is not familiar with the work, to adjust a pinion or differential and get a very bad grind. Adjustment after adjustment may

likewise be necessary to get a comparatively quiet axle. The owner who is bold enough to attempt an axle adjustment, usually telephones for an emergency repair truck to haul the car to the shop. Would it not be better to bring the car to us in the first place and avoid more serious trouble?

All the parts in an axle are equipped with bearings, and those bearings may also give trouble. If well lubricated they last a long time. When bearing replacement is needed we put in bearings as good as those the manufacturer installed.

Rear wheel wobbling knocks, due to worn wheel keys or worn axle shaft splines, are just a few other troubles that might happen to a

rear axle. The assembly of the unit is something that we must thoroughly understand. Our shopmen know just how to install felt washers to stop oil from leaking on the brakes which are part of the rear axle unit.

Very often an axle noise sounds as though it is right under the floor board and the owner moonkeys with the transmission only to hear a pinion break or an axle shaft snap when he drives again. The instant you hear a peculiar gear noise, a loud click or a knock, coming from the vicinity of the rear axle, that is the time to bring the bus to this shop.





W. E. Dugan, Pres. & Gen. Mgr.
Shuler Axle Co.



A. Keene, Sales Mgr.
U. S. Recording Inst. Co.



H. A. Heulings, Sales Rep.
J. G. Brill Co.



A. C. Bergman, Vice-Pres.
C. G. Spring & Bumper Co.



Jas. R. Fitzpatrick, Secy.
Haskelite Mfg. Corp.



W. C. Allen, Sales Supervisor
Black & Decker Mfg. Co.

Meet Some of the Leaders of the Motor Bus Industry

You'll go a long time before the opportunity again presents itself to meet these generals of the bus industry on this easy and familiar basis.

They were sketched by our artist, Peter Keenan, at the booth of the Chilton Class Journal Company, during the show and convention of the American Railway Association at Atlantic City last month.

Our diminutive artist caught that which the camera could never get—personality. He gives an animated outline of facial expression touched off with a caricature deftness that impells the freedom of camaraderie ordinarily the privilege of friendship only. As a result you get a really intimate close-up of the big men of the motor truck industry. So step up boys and meet the bunch as you may never meet them again in this way.

If the expressions appeal to you fellows, fine! If they don't, write to the subjects and tell them about it, not us.

We are very sorry that space limitation prevents an exhibition of all the electric traction officials. To do this would necessitate a special edition.



H. W. Alden, Chairman of Board
Timken-Detroit Axle Co.



Martin A. Oberlander
Western Electric Co.



Harvey S. Firestone, Pres.
Firestone Tire & Rubber Co.



Cornelius T. Myers
Chassis Lubricating Co.



Fred A. Nachman, Pres.
Nachman-Spring Filled Co.



Lynn Harvey, Dir. Sales Mgr.
India Tire & Rubber Co.



V. W. Kliersath, V. P.
Bragg-Kliersath Corp.



E. A. Clark, Mgr.
Budd Wheel Co.



F. R. Fageol, V. P. & Gen. Mgr.
Fageol Motors Co.



B. A. Hegeman, Jr., Pres.
National Ry. Appliance Co.



A. R. Erskine, Pres.
Studebaker Corp.



Philip Friedberg
Ajax Rubber Co.



J. W. Stephenson, Pres.
Indiana Truck Co.



Gordon Lee, Vice-Pres.
Fageol Motors Co.



L. E. Corcoran, Gen. Sales Mgr.
Pierce-Arrow Motor Car Co.



Miss A. Bustard, Sales Prom.
Haskelite Mfg. Co.



E. J. Thompson, Pres.
E. J. Thompson Co.



E. T. Lang, Pres.
Lang Body Co.



John P. Mahoney, Sales Mgr.
The Buda Co.



Herman Bender, Pres.
Bender Body Co.



W. L. Love, Adv. Mgr.
Timken-Detroit Axle Co.



Wm. J. Hawlowetz, Adv. Dept.
Western Electric Co.



Wm. Pope Snow, Sales Mgr.
Globe Ticket Co.



Roderick G. Hatch, Adv. Mgr.
Stewart Motor Corp.



E. H. Broadwell, Vice-Pres.
Fisk Tire Co.



John Hertz, Pres.
Yellow Truck & Coach Co.



Wm. M. Baldwin, Adv. Mgr.
Pierce-Arrow Motor Car Co.



J. J. Kiley, Distr. Mgr.
Lovejoy Mfg. Co.



A. J. Brosseau, Pres.
International Motor Co.



John W. Son, Jr., Sales Mgr.
Maremont Mfg. Co.



V. G. Phillips, Asst. Sales Mgr.
Yellow Truck & Coach Co.



Chas. A. Dana, Pres.
Spicer Mfg. Co.



F. W. Sheadle, Dir. Purchases
E. J. Thompson Co.



A. M. Robinson, Pub. Mgr.
J. G. Brill Co.



F. E. Triebner, Nat'l Sales Mgr.
The White Co.



C. T. Kling, Asst. Sales Mgr.
Willard Storage Battery Co.



M. E. Forbes, Pres. & Gen. Mgr.
Pierce-Arrow Motor Car Co.



Britton I. Budd, Pres.
Chicago Rapid Transit Co.



F. H. Burr, Spec. Rep.
Cleveland Pneumatic Tool Co.



C. D. McKim, Sales Mgr.
Continental Motor Corp.



R. R. Paradies, S. M. East. Div.
Chandler Company



G. R. Fesenden, Pub. Mgr.
North East Electric Co.



C. S. Dahlquist, Sales Engr.
Timken-Detroit Axle Co.



E. W. Clark, Adv. Mgr.
E. C. Magford, Factory Mgr.
Clark Equipment Co.



Jas. J. Dunne, Eastern Mgr.
Haskelite Mfg. Corp.



H. G. Walton, Sales Agent
Bethlehem Steel Co.



H. D. Elvidge, Mgr. Sales Prom.
Martin Parry Corp.



General Guy E. Tripp, Chairman
Westinghouse Elec. & Mfg. Co.



Cornell S. Hawley, Pres.
Consolidated Car Heating Co.



Frank T. Macey, V. P.
Larrabee Deyo M. T. Co., Inc.



J. P. Maloney, Field Sales Mgr.
Pyrene Mfg. Co.



Harry J. Porter, V. P.
Timken Roller Bearing Co.



Arthur A. Skinner, Sales Mgr.
Leece-Neville Co.



H. A. Fitzjohn, Pres.
Fitzjohn Mfg. Co.



R. A. Whitehead, Executive
Union Motor Truck Co.



Owen D. Young, Chairman
General Electric Co.



S. M. Curwen, Pres.
J. G. Brill Co.



J. C. McQuiston, Mgr. Pub. Dept.
Westinghouse Elec. & Mfg. Co.



W. G. Ressler, Secy.
Blanchard Bros. & Lane



C. M. McCreery
Six Wheel Co.



W. C. White, Pres.
White Co.



Norman Bell, Sales Mgr.
Norma-Hoffmann Bearings Corp.



Walter A. Reichle, Chief Engr.
Ruggles Motor Truck Co.



L. E. Lighton, Mgr. of A. S.
Electric Storage Battery Co.



Geo. Walther, Pres.
Dayton Steel Foundry Co.



W. C. Parker, S. M., B. & T. D.
Reo Motor Co.



R. J. Nightingale, Sales Mgr.
Willard Storage Battery Co.



B. M. Leece, Pres.
Leece-Neville Co.



Walter C. Guildler, Pres.
Guildler Engr. Co.



Fred R. Wilhelmy, Sales Mgr.
Cleveland Tanning Co.



Geo. A. Crittenden, Sales Mgr.
Lovejoy Mfg. Co.



Wm. A. Lake, Sales Executive
The Pantasote Co.



F. Geo. Walker, Sales Mgr.
Ohio Mfg. Co.



Wm. H. Armstrong
Ingersoll Rand Co.



F. V. Buckwalter, V. P.
Timken Roller Bearing Co.



H. D. Hukill, Chief Auto. Sales
Westinghouse Air Brake Co.



Harry D. Kline, Adv. Mgr.
Continental Motor Co.



C. F. Baker, Sales Engr.
Dayton Steel Foundry Co.

Stewart Adds Two Six-Cylinder Speed Trucks

Two new six-cylinder speed trucks, the 16X of 1½-tons capacity and the 17X of 1½-2 tons capacity, have been placed on the market by the Stewart Motor Corp., Buffalo, N. Y. Both of these new models are equipped with a 3¼ by 4½ in. engine developing 45 hp. on the block as fitted to the smaller and 60 hp. as fitted to the larger truck. The crankshaft of the engine is supported in four bearings. A Zenith car-

buretor is fitted and a Remy generator and ignition unit.

The clutch is a dry plate type with twelve plates and the transmission the conventional three-speed and reverse, bolted to the bell housing of the engine. The steering gear is a Gemmer, with spark and throttle levers on top of the steering wheel. The horn button is located at the center of the steering wheel.

The frame is of pressed steel with a maximum depth of section of 6 in. The front axle is of the drop-forged type with taper roller bearings on the wheel spindles.

So far the specifications of the two truck models are alike, but the larger truck has heavier springs and axles. The rear axles of both models are made up of a single piece cast steel housing and axle shafts mounted in taper roller bearings, but while the shafts in the smaller truck have a diameter of 1½ in., those in the larger have a diameter of 2½ in. Wheelbases are 130 and 145 in. for the two models respectively, but longer wheelbases can be furnished.

Wheels are wood-spoked on the smaller truck and cast steel on the larger. The former is equipped with 33 by 5 in. cord tires and the latter with 32 by 6 in. The chassis weigh 2,750 and 3,350 lb. respectively. The small chassis takes an 8 ft. body and larger one a 10 ft. body, measuring from behind driver's seat.



Stewart 1½-2 ton speed truck

Indiana Truck Corp. Opens St. Louis Branch

The formal opening of the new factory branch, Indiana Truck Co., St. Louis, Mo., was held Thursday, October 22d.

The new branch is located at Lindell boulevard at Sarah street, in new and commodious quarters, beautiful show-room, well lighted and equipped.

A sales meeting was held during this opening, the Indiana Truck Corporation being represented by Mr. J. W. Stephenson president, and Mr. E. A. Kightlinger, vice president charge of sales.

Hannum Steering Gear Embodies New Principle

Greater leverage brought into play at extreme end of travel. Less steering motion required when car is under normal driving condition

By JOHN YOUNGER

STEERING gears have for a long time been largely taken for granted, and it is only recently that attention has been focused on their effects and defects by the advent of balloon tires and women drivers. Easy steering at all times is now a prime essential for the up-to-date automobile and commercial car. Among those who have been studying the fundamentals of this subject are George H. Hannum and T. Ray Johnson, men of long experience in the art of designing and manufacturing steering gears. The results of their work and study are embodied in this new gear which will be manufactured by the Hannum Manufacturing Company, of Milwaukee.

An important fact found in this study is that the front of a car is lifted in traveling from the point of extreme travel to the central position; this vertical movement amounting to as much as 3/16 in., or even a 1/4 in. It is not generally understood by drivers that every time they steer their car over from

central position they are actually lifting a weight of from 1000 to 2000 lbs. a height of nearly 1/4 in. When trucks and buses are considered this weight increases very greatly, so the spectacle of a truck or bus driver pulling his steering wheel over by sheer strength need not be wondered at. What is not so obvious is that this weight lifting is not equal at all points of the steering travel, but varies along a curve—theoretically, a size curve, and the fact found out by the Hannum Company research men is that the point of greatest weight to be lifted occurs at the point of maximum steering travel. As the front wheels approach their central position the effort required to raise the front portion of the car weight decreases for an equal amount of travel of the steering wheel.

Eliminate Difficult Steering

Furthermore, while extreme travel is met with infrequently in normal driving, it is very common in everyday parking when maneuvering in small spaces and



Gear with steering nut in center

it is not always possible to have the front wheels turning over when the steering gear is in operation. Steering is naturally more difficult under such conditions as the fact that the tire is not moving circumferentially allows the tire to distort at the base, thus adding still more to the effort required.

It is a logical conclusion, therefore, from these fundamental facts that the steering gear should have sufficient leverage or gear ratio at its extreme points to take care of these enhanced efforts. The Hannum gear provides this feature as will be seen later.

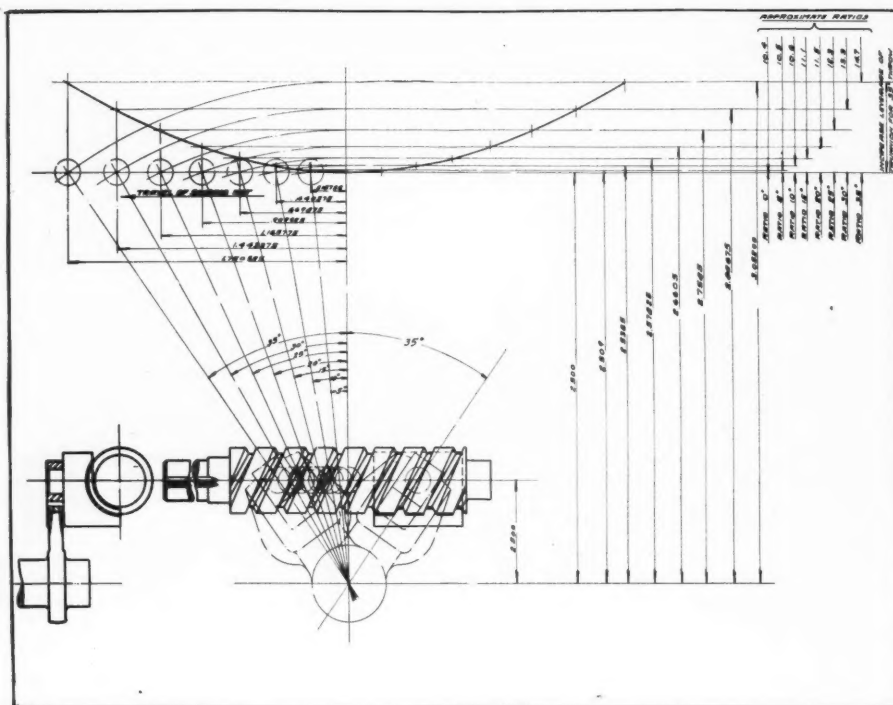
Another point obvious to everyone who drives, is that with normal driving there is reasonably small deviation from the straight path. Even curves are rarely taken at full travel and the great majority of driving only calls for a movement of the steering wheel of about half a turn at most. It is evident that there should be a minimum movement of the steering wheel for a maximum steering movement of the front wheels to obtain steering comfort.

A word as how this is accomplished in the Hannum gear. A trunnion block (see phantom view) pivoted on a pin integral with the steering nut connects through the forked jaws of the rocking shaft to the steering pitman arm. At the extreme travel (see diagram) the nut has moved to the end of the screw thread, and the trunnion block has moved out further along the jaws, thereby increasing the leverage to operate the pitman arm. Obviously, this sliding of the trunnion block increases the gear ratio, the change for every five degree movement of the steering wheel from center being shown. This gives decreased steering effort at extreme travel while parking, and lessened movement of the steering wheel while driving.

Back Whip

Back whip has been eliminated in this gear in the following manner:

It will be noticed from the illustrations that the gear nut only embraces a quarter of a turn on the screw, instead of the more usual complete turn or half turn.



Change in gear ratio for every five degree movement of steering wheel from center

Now, either the turn or half turn type of nut is supported almost entirely by the threads and when a shock comes on the nut, the shock is instantly transmitted to the screw and then to the wheel. However, in the Hannum gear, a shock on the pitman arm is transferred to the nut by the trunnion pin which is not at the center of the nut. This causes a momentary rocking action, or rather a tendency to action on the nut block, the face of which is fitted accurately to the gear housing. A thrust is imposed on this face, and actually tends to force the grease out from the faces, the viscosity of the grease acting as a cushion to absorb a part of the blow. The shock is thus largely dissipated and absorbed in the housing and only a nominal fraction of the usual shock is transferred to the hands.

The question might be raised as to how this grease or oil, once squeezed out, would get back again. Due to the construction of the mechanism in the housing the nut virtually acts as a piston plunger and forces the lubricant throughout the housing and through all the

wearing surfaces. This automatic lubrication feature has an important effect on the ease of steering, also the long life and low maintenance of the mechanism.

Minor Details of Improvement

Other features are no less valuable and interesting. The nut threads have an actual one square inch of bearing area in the medium car size. Truck and bus sizes have five square inches.

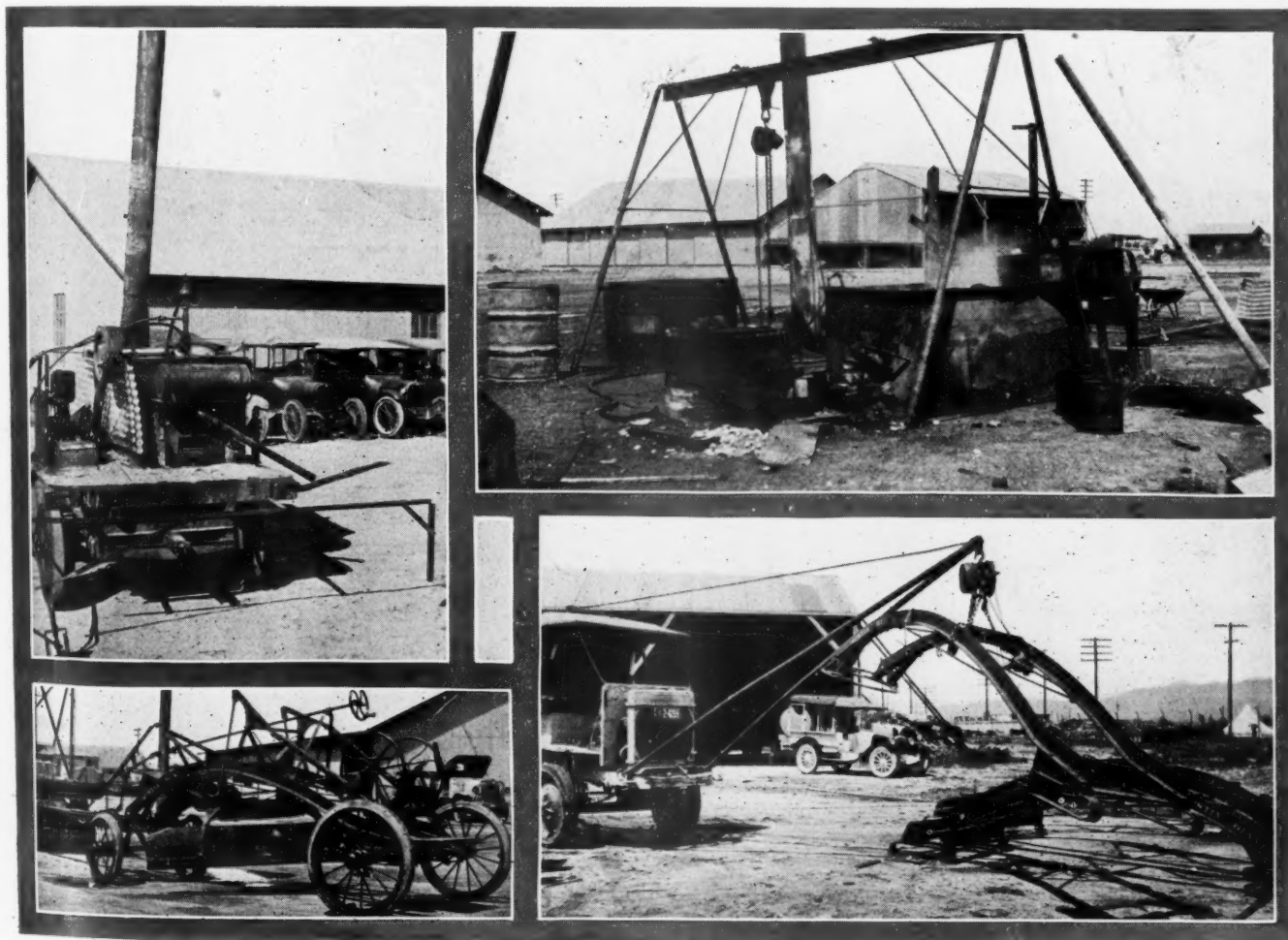
The screw itself is of S.A.E. 1020 steel, case-hardened and accurately ground after hardening. The nut is of the same steel also ground after case-hardening. The trunnion shaft and the trunnion block are of S.A.E. 2145 steel heat treated, and in this connection it is worth noting that each individual piece is given a Rockwell test to insure hardening or tempering treatments having been up to standard specifications. The housing is of malleable iron and all bearing strips and faces are accurately milled in jigs to secure proper alignment.

The small, but not insignificant, feature

is that the trunnion block not only "trunnions" on the pin, but has a spherical seat in the forks of the rocking shaft, allowing it to swivel slightly and pick out its own perfect alignment. The bearings used are of the combined radial and thrust load type.

Another feature is that the gear is oil tight by the grind of the housing surfaces and the use of a gasket. This feature allows oil to be used where preferred to grease. The steering wheel turns normally two and one-half times for complete travel.

As another step toward greater business development, the Chicago Wheel Spring Company, Budd Wheel service station in the Chicago district, has established a sub-station in Green Bay, Wisconsin, known as the Green Bay Auto Parts Company. This latest addition to the Chicago Wheel and Spring group gives this organization the distinction of being the Budd service station with the largest number of sub-stations in the country.



Interesting features of Lankershim yards of the California Highway Commission

The upper right illustration shows a vat for cleaning oil and grease from metal. It contains Oakite and is capable of accommodating a large truck engine. Engines are handled to and from the vat by means of chain hoist operating on trolley carried on a long I-beam which is supported by four legs made of pipe. The lower right shows how a truck equipped with boom is used in assembling graders. The upper left shows an asphalt spraying plant assembled for painting traffic guide lines in the center of concrete pavement. It is mounted on a trailer and hauled by a truck. The lower left shows a rubber-tired grader leaving the yard for service on the state highway.

Water Cooling Capacities

(Capacities

This Table Will Be Found of Value in Determining the Amount of

NAME	1/2	3/4	1	1 1/4	1 1/2	2	2 1/4	2 1/2	3	3 1/2	4	4 1/2	5	6 1/4	7
Acme 1923			22		22	22			36			36		41	
Acme 1924			22		24	22			36			36		41	
Acme 1925			24		24	24			36			36		41	
American LaFrance 1923						28				44.5			48		48
American LaFrance 1924-25						32				44.5			48		48
American 1923								32			40		40		
Armleder 1923					22			26		31					
Armleder 1924-25					29			37	37	42					
Atterbury 1923					22			28		34			40		
Atterbury 1924-25					24			28		34			44		
Autoear 1923-24-25						18			28				30		
Available 1923				21	21	21		21		30			51		
Bethlehem 1923-24			22			36			36						
Bethlehem 1925			22			36		36		36					
Betz 1923			20			22		26							
Brinton 1923					16			24							
Brockway 1923			18		28			30	32				45		
Brockway 1924-25				22		22		26			30		48		
Buffalo 1923					20			24							
Case 1923						24									
Chevrolet 1923	8		8												
Chevrolet 1924-25	8	8	8												
Chicago 1923					32			32		40			40		
Chicago 1924-25			28		32	32		32		40			40		
Commerce 1923			19	22				24							
Commerce 1924					16	16		24							
Commerce 1925			12		16	16		24 & 26							
Concord 1923-24-25			20		20			20							
Corbitt 1923-24		24	24		24	24		24	24	24			26		
Corbitt 1925					24	24		24	24	24			26		
Day Elder 1923			13		19	23		24		33			37		
Day Elder 1924					18	19		23	24		33		37		
Day Elder 1925					18	18		23	24		33		37		
Denby 1924-25			32		32	24		32							
Diamond T 1923			24		24			24		34			34 & 38.5		
Diamond T 1924			24	24	24			24		34			38.5		
Diamond T 1925			28	28	28			30		34			38.5		
Dixon 1923					24			28		32					
Dodge 1923-24-25		11													
Dorris 1923			12							20					
Dorris 1924-25						20				20					
Double Drive 1923-24-25									38						
Duplex 1923-24-25			15		20	20		20	20	32					
Eagle 1923			24		24	24			24						
Fageol 1923					24			32		38			38		
Fageol 1924						42		44		56				56	
Fageol 1925					32	42		44		56				56	
Federal 1923-24		18			18	20		20		28	28		32		
Federal 1925		20		20				24		28				33	
Fisher Fast Freight 1925					20										
Ford 1923-24-25			12.5												
Front Drive 1923-24-25					27										
Garford 1923-24-25			16			20		24			36		46		46
G. M. C. 1923-24			20.5							40			40		
G. M. C. 1925			18			30				32			32		
Gotfredson 1924-25			16		18			29			52		58		
Graham 1923-24-25			11		11			30	42						
Gramm Bernstein 1923-24-25				19	24.5	24.5		24.5	38		38		42		
Gramm & Kincaid 1925					28 & 30	28 & 30		28 & 30	47		47				
Grass Premier 1923-24-25			24		24	26		32		32					
Gray 1923-24			13												
Gray 1925			14												
Hahn 1923-24-25			24	24	28	28		36	36				60		
Harvey 1923						46		46		56					
Harvey 1924-25						46		46		56					
Hug 1923-24-25					15										
Indiana 1923			17		22	24				24.5			37		
Indiana 1924-25			25		27	26.5		26.5		28	36		37		
International Harvester 1923			22 & 17		17				30				30		
International Harvester 1924-25			22		39	39			43			43	43		
Kalamazoo 1923					28			30		34					
Kearns 1923-24-25			16		20	30		36		48			48		

HOW TO USE

Addition of denatured alcohol to the water of the cooling system is the most commonly employed method of preparing anti-freeze solutions. The amount of alcohol to be added to the cooling system, of course, depends upon the temperature conditions

under which the truck is to be operated. The proportion of alcohol varies in direct ratio with temperature conditions. If protection against freezing is desired in regions where the temperature will not drop below zero, Fahrenheit, but thirty per cent of

of Current Truck Models

Given in Quarts)

Anti-Freeze Solution Necessary for Cooling Systems for Winter Operation

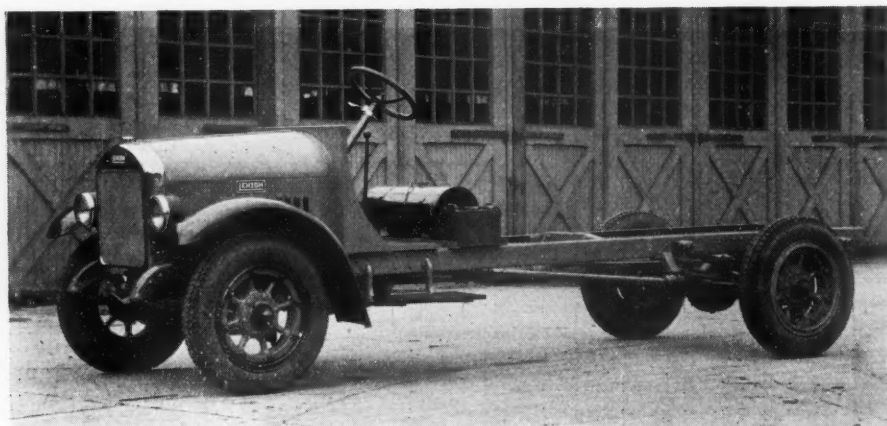
NAME	1/2	3/4	1	1 1/4	1 1/2	2	2 1/4	2 1/2	3	3 1/2	4	4 1/2	5	6 1/4	7
Kelly-Springfield 1923.....					24			24		52			52		
Kelly-Springfield 1924-25.....					28			28		52			52		
Keystone 1923.....						20					30				
Kissel 1923-24-25.....			30		30			30							
Klieber 1923-24-25.....			36			44		48		60					
Lange 1923.....								34		34					
Lange 1924.....					28			34		34					
Lange 1925.....					28			38	36	34					
Larrabee 1923.....				20	20 & 24			36		36	60		60		
Larrabee 1924.....				20	21 & 29			36		36 & 60					
Larrabee 1925.....		14		20	21 & 29			36		60					
Maccar 1923.....					28	28			30		32		38		
Maccar 1924.....				26		28			28		32		38		
Maccar 1925.....				26		28 & 30					32		38		
Mack 1923-24-25.....					25	25		25		62			62		62
Maxwell 1923.....					20										
Moreland 1923.....			23		23	23		23	29				34		
Moreland 1924-25.....			23		23	23		23	29		29		34		
Nash 1923-24-25.....					22			22							
Nash Quad 1923-24-25.....								40							
Oldsmobile 1923.....			19												
Olympic 1923.....								33							
Overland 1923-24-25.....	12														
Parker 1923.....			19		22	26		28		28			44		
Patriot 1923-24.....			22			30			37				44		
Patriot 1925.....				22		30			37						
Perfection 1923.....		22		22		40						56	56		
Pierce-Arrow 1923-24-25.....						38		38	38	50	50	50	50		50
Pioneer 1923.....			26												
Pittsburgher 1923.....								44	44	44					
Power 1923.....					22			28		32					
Rainier 1923-24-25.....		20	20		28	32		32		40			40		
Rehberger 1923-24-25.....						28			44		44		65		
Reo 1923-24.....				14											
Reo 1925.....				14		19									
Republic 1923.....				18		22			28 & 30		30				
Republic 1924-25.....				22	22	22		22	26			30	31		
Ruggles 1923.....		16		22		22		22							
Ruggles 1924.....		16		28	28	28		28							
Ruggles 1925.....			18	28	28	28		28							
Rumely 1923-24-25.....					24										
Sanford 1923.....			20		20			30		30			32		
Sanford 1924.....			20		20			30		32			32		
Sanford 1925.....			20		20		24	30		32			32		
Schacht 1923.....			24		24	28.5			28.5		29.5		29.5		29.5
Schacht 1924-25.....			24		24	24		40	40	40			42		
Selden 1923-24-25.....			16			28	28	28	32	32	44		48		
Service 1923.....			16		24	33			33		48			48	
Service 1924-25.....			16		33				33		48		48		
Signal 1923.....			18		18			19		24			32		
Standard 1923.....			17		17			27		30			38		
Standard 1924-25.....				18	18			26		31			36		
Sterling 1923.....					30	30		30		42			42		42
Sterling 1924-25.....					30	30		30	30		42		42		
Stewart 1923.....			22	20	20	20		26	26	28	28				
Stewart 1924.....			22	21	22	22		26	26	28	28				
Stewart 1925.....			22	22	23	23		26		28					
Transport 1923.....			22.5		24	25			23.5	26			43		
Twin City 1923.....						26				39					
Union 1923.....								18			18	18	18		
United 1923.....			18		25	25		25		36			36		
United 1924-25.....			18	25	25	25		25	25				36		
U. S. 1923-24-25.....				20	22	22			32		40		40		60
Velie 1923.....						24									
Victor 1925.....				30	35	35		35		32	32		32		
Ward La France 1923-25.....								36		48			48		
Ward La France 1925.....								36		48			48		48
White 1923-24.....		19				19				30			30		
White 1925.....		19				19		27		30			30		
Witt Wil 1923-24-25.....					24	24		32	32				40		
Yellow Cab 1923.....		17.5	17.5	17.5											

THIS TABLE

the volume need be alcohol. For example, a cooling system having a total capacity of 20 quarts, will consist of 14 quarts of water and 6 quarts of alcohol. Thirty per cent of 20 is 6. This 6 represents the alcohol content.

For operation in temperature of 30 degrees above zero, but 2 per cent of the volume need be alcohol; 20 degrees, 13 per cent; 10 degrees, 22 1/2 per cent; zero, 30 per cent; 10 degrees below zero, 37 per cent; 20 degrees below, 43 per cent; 30 degrees below, 48 1/2 per cent; and 40 degrees below, 56 per cent.

The "Lehigh" Makes Its Debut



Designed in every respect for operation over the better roads of today

FROM the famous Lehigh Valley of Pennsylvania comes the announcement of a newcomer in the motor truck field, hence its name—the Lehigh. Built by The Lehigh Company, of Allentown, Pa., the new job carries with it convictions in the matter of design which presages not only a healthy future for the company responsible for it, but insures the customer a minimum of upkeep expense and longer truck life.

The basic idea upon which the Lehigh has been designed, has been carried out throughout every unit. The whole design has been centered around one thought, namely, that the vehicle should be built for the better roads of today.

The manufacturer has taken advantage of the dominant thought in the mind of every experienced truck owner, that unnecessary vehicle weight adds nothing to the income of the vehicle but adds considerable to the maintenance expense. To obtain economy in motor transportation this manufacturer believes in saving as much weight in the chassis as possible consistent with safety for the load to be carried. By using alloy steels of great strength throughout, it has been able to keep the weight of the job (with a capacity of 4,000 lbs. at 45 miles per hour) down to 3,270 lbs. (of which 500 lbs. is in tires, tubes and rims) which is 730 lbs. less than its pay load and 1,330 lbs. less than the average two-ton chassis. By keeping the weight 730 lbs. less than its pay load there is gained a horse power advantage of 25.6 lbs.; i. e., the average two-ton truck carries 95.6 lbs. of chassis weight per horse power, while the Lehigh carries but 70 lbs.

The two-ton Lehigh is powered by the Hercules 4 x 5 thermo syphon cooled engine. Specifications are as follows:

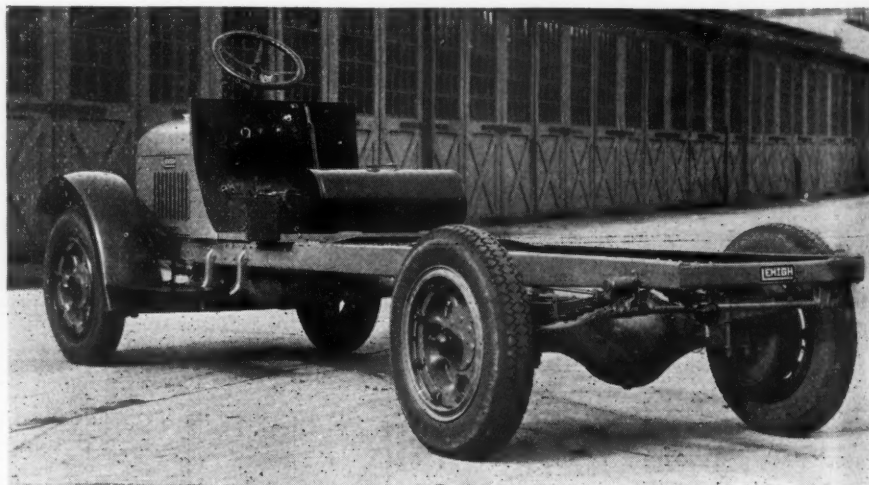
Six plate multi-disk clutch; three speed selective transmission; 1½ in. carburetor; battery ignition with distributor; tubular propeller shaft in two sections with SKF self aligning bearing in center; Ross cam and lever steering

gear; I-beam front axle; spiral bevel gear rear axle with a one piece housing and no welds; gear ratio 6 2/3 to 1.

Front springs are 40 in. by 2¼ in.; rear springs 53 in. long and 3 in. wide. The springs are relieved of driving strain by the use of electric furnace steel radius rods with hardened and ground pins.

The frame is made of heat treated pressed steel. The channel is 5½ in. deep, 7/32 in. thick with a 3½ in. flange. The overall length is 200 in. Width, at front 31½ in.; rear 34 in. The top of the frame is only 27 in. from the ground when the chassis is unloaded which results in a very low center of gravity but ample road clearance—9½ in. front and 9 in. rear.

The wheelbase is 146 in. Wheels are metal, 20 in. diameter, on which are mounted 32 x 6 pneumatic cords front and rear. Brakes are of internal expanding type and extremely large, giving one inch of braking resistance for each seven pounds of chassis weight.



With a capacity of 4000 lbs. at 45 m. p. h. the new Lehigh only weighs 3,270 lbs.

Electrical equipment includes electric generator, starter, battery drum head lights with anti-glare lenses, tail light, switch, ammeter and electric horn.

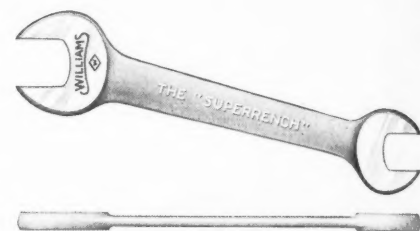
Tool equipment includes tool kit, spare rim and Alemite-Zerk grease gun.

The list price of the Lehigh is \$1,695 f. o. b., Allentown, Pa.

The Superrench

A new line of wrenches, made from Chrome-Molybdenum Steel, has just been introduced by J. H. Williams & Co., of Buffalo, N. Y. Known as the "Superrench," these tools will supplement their Superior Drop-Forged Wrenches of Carbon steel.

Chrome-Molybdenum steel was selected as providing the strongest and most desirable material for the purpose. It makes possible a refinement in design and a decrease in weight impossible of attainment with carbon steel.



Made of Chrome-Molybdenum Steel for lightness and strength

The Superrench is claimed to strip the thread of any standard nut, or break the bolt without spreading the jaws. All are warranted against breakage.

It is now available in four styles: Engineers' pattern, double head, 15 degree angle openings—a wrench with thinner and narrower jaws and generous length; General Service "S" pattern, long and light, with unusual leverage; Construction pattern, single head, 15 degree angle opening; Structural pattern, single head, straight opening, offset handle.

Commercial Car Specifications—Corrected Monthly

The Specifications, Chassis Prices, Etc., Are Corrected Each Month From Data Supplied Direct by the Makers. Gasoline Tractor-Trucks Will be Found at the End of Gasoline Commercial Cars

Those Chassis Which Are Sold and Recommended for Passenger Transportation Are Designated in the Following Table by Reference Sign (\$) in Front of the Name For Specially Designed Motor Bus Chassis See Pages 44 and 45

(Where prices are not given it is because we have been unable to get them from authoritative sources)

Key of abbreviations, page 46

Trade Name and Model	General			Engine						Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Chassis Weight (lbs.)						
	Chassis Price	Tire Size §§		Bore and Stroke (Inches)	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System			Generator and Starter (Make)	Type	Make and Model	Location	No. of Forward Speeds	Universals (Make)						Make and Model	Final Drive	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location
		Front (Inches)	Rear (Inches)							Carburetor (Make)	Fuel Feed																		
1000 Pounds																													
Chevrolet Sup.Com.Ch.	425 103	30x3 1/2	30x3 1/2	Own 91	3 1/2 x 4 1/2	21 7/8	19.6 L	PS	Non	Har	Car	Rem	Rem	Own Sup	U	3	Own	Own 91	S	3.82	12.7	A	Own Sup	S.S.	Own	Own	Hay	Jax	1520
Overland 91	395 100	30x3 1/2	30x3 1/2	Con	3 1/2 x 4 1/2	19 1/2	18.2 L	PC	Non	Har	Car	Rem	Rem	Own 91	U	3	Own	Own 91	S	4.50	17.6	A	Own SE	Own	Own	Hay	Hay	Hay	1472
Star	425 102	30x3 1/2	30x3 1/2	Con	3 1/2 x 4 1/2	18.2 L		PC	Non	Fed	Car	Rem	Rem	Own	U	3	Own	Own	S	4.57	16.16	A	Own SE	Own	Own	Hay	Hay	Hay	1465
1500 Pounds																													
Dodge Brothers	730 116	32x4	32x4	Own	3 1/2 x 4 1/2	24 0		SP	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	4.54	18.9	A	Own	Own	Own	Kel	Kel		1992
Larabee A1	133	29x4 1/2	29x4 1/2	Con	3 1/2 x 4 1/2	23 4		PC	Non	Har	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.10	22.5	A	Own	Own	Own	Jon	Jon		2730
Rambling R-31	1070 125	32x5	35x5	Con N	3 1/2 x 5	22 5/8		PS	Non	Har	Ste	Bos	Bos	Own 15	U	3	Own	Own 15	S	4.67	20.2	A	Own 15	Own	Own	Jon	Jon		2500
White 15	2150 133 1/2	34x5	34x5	Own GR	3 1/2 x 5 1/2	22 5/8		SP	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.6	23.4	A	Own	Own	Own	Jon	Jon		3225
White 15-45	2500 143 1/2	34x5 1/2	34x5 1/2	Own GR	3 1/2 x 5 1/2	22 5/8		PC	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.6	23.4	A	Own	Own	Own	Jon	Jon		3225
Yellow Cab Mod T3	1295 109	29x4 1/2	29x4 1/2	Con V-7	3 1/2 x 5	22 5/8		PS	Non	Lon	Ste	Bos	Bos	Own	U	3	Own	Own	S	4.90	16.3	B	Own	Own	Own	Jon	Jon		3575
1 Ton																													
Acme Flyer	130	30x5	30x5	Con S4	4 1/2 x 5 1/2	28 9/16		FP	Non	Per	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.10	24.4	A	Own	Own	Own	Smi	Smi		3125
Autocar F	197	34x4 1/2	34x4 1/2	Own 2	4 1/2 x 5 1/2	28 9/16		SP	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.10	24.4	A	Own	Own	Own	Smi	Smi		3800
Autocar G	120	34x4 1/2	34x4 1/2	Own 2	4 1/2 x 5 1/2	28 9/16		SP	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.10	24.4	A	Own	Own	Own	Smi	Smi		3800
Available L-1	133	33x5	33x5	Con N	4 1/2 x 5	25 6/16		PC	Non	Chi	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.6	23.4	A	Own	Own	Own	Smi	Smi		3100
Bessemer G	1550 124	34x5 1/2	34x5 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PS	Non	Non	Ste	Bos	Bos	Own	U	3	Own	Own	S	7.00	28.0	A	Own	Own	Own	Smi	Smi		3000
Hets J-3	1450 140	34x5 1/2	34x5 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	Non	Ste	Bos	Bos	Own	U	3	Own	Own	S	7.00	28.0	A	Own	Own	Own	Smi	Smi		3000
Biederman	1700 138	34x5 1/2	34x5 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	Non	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.5	27	A	Own	Own	Own	Smi	Smi		3150
Chevrolet Sup.	550 124	30x5 1/2	30x5 1/2	Own Sup	3 1/2 x 5 1/2	27 3/8		PC	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.5	27	A	Own	Own	Own	Smi	Smi		3200
Chicago	132	30x5	30x5	Con S4	4 1/2 x 5	25 6/16		PC	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.88	23.4	A	Own	Own	Own	Smi	Smi		3450
Clydesdale 16	1305 130	30x5	30x5	Con S4	4 1/2 x 5	25 6/16		PC	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.43	18.0	A	Own	Own	Own	Smi	Smi		3450
Commerce Distributor	1895 130	30x5	30x5	Con S4	4 1/2 x 5	25 6/16		PC	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	5.66	20.5	A	Own	Own	Own	Smi	Smi		2820
Daimler K-2	2400 194	32x4 1/2	32x4 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	Mod	Ste	Bos	Bos	Own	U	3	Own	Own	S	4.23	15.6	A	Own	Own	Own	Smi	Smi		2000
Duplex G	182	35x5	35x5	Con 7V	3 1/2 x 5 1/2	22 5/8		PC	Non	Mod	Ste	Bos	Bos	Own	U	3	Own	Own	S	6.11	22.3	A	Own	Own	Own	Smi	Smi		3300
Federal Knight	1095 124	32x4 1/2	32x4 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	Mod	Ste	Bos	Bos	Own	U	3	Own	Own	S	6.11	22.3	A	Own	Own	Own	Smi	Smi		2400
Ford T	365 123	30x5 1/2	30x5 1/2	Own T.T.	3 1/2 x 5 1/2	22 5/8		SP	Non	Own	Ste	Bos	Bos	Own	U	3	Own	Own	S	Opt	19.9	B	Own	Own	Own	Smi	Smi		1572
Garford 16	1590 132	32x5	32x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	Chi	Ste	Bos	Bos	Own	U	3	Own	Own	S	6.50			Own	Own	Own	Smi	Smi		3500
Gary Express	1890 132	32x5	32x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	Chi	Ste	Bos	Bos	Own	U	3	Own	Own	S	6.50			Own	Own	Own	Smi	Smi		3500
GMC K-17	131	33x5	33x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	Chi	Ste	Bos	Bos	Own	U	3	Own	Own	S	6.50			Own	Own	Own	Smi	Smi		3500
Graham Bros. BB	995 130	33x5	33x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	Chi	Ste	Bos	Bos	Own	U	3	Own	Own	S	6.50			Own	Own	Own	Smi	Smi		3500
Graham-Kincaid 233N	133	30x5	30x5	Con N	3 1/2 x 5	22 5/8		PS	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Graham-Kincaid 263N	133	30x5	30x5	Con N	3 1/2 x 5	22 5/8		PS	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Graham Premier 40	1550 130	30x5	30x5	Con N	3 1/2 x 5	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Indiana 11	129	30x5	30x5	Con N	3 1/2 x 5	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Intercontinental	124	32x4 1/2	32x4 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Kenworth OS	2150 131	34x4 1/2	34x4 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
King-Zettler	2050 134	34x4 1/2	34x4 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Kleber	2600 130	34x5	34x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Lehigh KN	1595 125	34x5	34x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
LeMoore GP-1	151	34x4 1/2	34x4 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Master 11B	132	35x5	35x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Mercedes-Benz	1875 130	35x5	35x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3300
Overland R-R	2260 140	34x4 1/2	34x4 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3780
Overland RC	1775 131	34x5	34x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		3780
Nash 40	1505 130	34x4 1/2	34x4 1/2	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		2880
Noble A-76	1775 131	34x5	34x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		2880
O K O	1575 131	34x5	34x5	Con N	3 1/2 x 5 1/2	22 5/8		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		2880
Overland A2	780 122	30x3 1/2	30x3 1/2	Con N	3 1/2 x 4 1/2	18 1/2		PC	Non	McC	Ste	N-E	N-E	Own	U	3	Own	Own	S	5.10	15.0	B	Own	Own	Own	Smi	Smi		2850
																													2925
																													3335
																													3450
																													3400
																													3400
																													3250

Trade Name and Model	General			Engine						Electrical System		Clutch		Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model		Springs (Make)		Steering Gear (Make)		Wheels (Make)		Rims (Make)		Chassis Weight (lbs.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	Chassis Price	Tire Size		Hear (Inches)	Make and Model	Bore and Stroke (Inches)	N.A.C.C. Rated H.P.	Valve Arrangement		Oiling System	Governor (Make)	Radiator (Make)	Fuel System		Ignition System		Generator and Starter (Make)	Clutch Make	Type	Location		No. of Forward Speeds	Universals (Make)		Make and Model		Final Drive	Type		Total Reduction in High	Total Reduction in Low	Brakes, Location	Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		Standard Wheelbase	Front (Inches)					Carburetor	Fuel Feed				Carburetor (Make)	Carburetor (Make)	Location	Make and Model				Final Drive	High		Low	Location	Make and Model	High		Low	Location										Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High	Low	Location	Make and Model	High

1991

Key of abbreviations, page 46

For full name and address of manufacturer and information regarding complete line see page 42

Trade Name and Model	General			Engine				Electrical System		Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.) (stripped)									
	Chassis Price	Tire Size (inches)		Bore and Stroke (inches)	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)		Fuel System	Ignition System (Make)	Generator and Starter (Make)	Type	No. of Forward Speeds	Location							Universals (Make)	Make and Model	Final Drive	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location		
		Standard Wheelbase (inches)	Front (inches)																											Rear (inches)	
2 Ton-Con'd																															
Autocar K	138	34x6 1/2	36x10	4 1/2 x 5 1/2	25.6	L	SP	Pha	Ow	Str	G	Bos	L-N*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.72	46.3	A	Own H	Del	Ros	Hoo	5600	
Autocar FH	114	34x5 1/2	34x7	4 1/2 x 5 1/2	25.6	L	SP	Pha	Ow	Str	G	Bos	L-N*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.03	42.2	A	Own H	Del	Ros	Hoo	5100	
Autocar GK	138	34x5 1/2	34x7 1/2	4 1/2 x 5 1/2	25.6	L	SP	Pha	Ow	Str	G	Bos	L-N*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.03	42.2	A	Own H	Del	Ros	Hoo	5100	
Available L-2	152	36x8	36x8 1/2	4 1/2 x 5 1/2	25.6	L	SP	Pha	Ow	Str	G	Bos	L-N*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	36.1	A	Own H	Del	Ros	Hoo	5100	
Brookway S	140	34x4	34x6 1/2	4 1/2 x 5 1/2	25.6	L	SP	Pha	Ow	Str	G	Bos	L-N*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	36.1	A	Own H	Del	Ros	Hoo	5100	
Brookway SK	147	34x4	34x6 1/2	4 1/2 x 5 1/2	25.6	L	SP	Pha	Ow	Str	G	Bos	L-N*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	36.1	A	Own H	Del	Ros	Hoo	5100	
Buck 44	160	36x4 1/2	36x7 1/2	4 1/2 x 5 1/2	25.6	L	SP	Pha	Ow	Str	G	Bos	L-N*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	36.1	A	Own H	Del	Ros	Hoo	5100	
Buck 46	160	36x4 1/2	36x7 1/2	4 1/2 x 5 1/2	25.6	L	SP	Pha	Ow	Str	G	Bos	L-N*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	36.1	A	Own H	Del	Ros	Hoo	5100	
Casco C	2700	32x6	36x8	3 3/4 x 5 1/2	22.5	L	PC	Non	G&O	Ow	Str	G	Bos	Ful	Ow	Ful	GU 12	U	4	Spi	W	66A	7.75	37.2	A	W	Per	W	Are	4800	
Casco D	2950	32x6	36x8	3 3/4 x 5 1/2	22.5	L	PC	Non	G&O	Ow	Str	G	Bos	Ful	Ow	Ful	GU 12	U	4	Spi	W	66A	7.75	37.2	A	W	Per	W	Are	4800	
Clinton 45	2840	34x4 1/2	34x4 1/2	4 1/2 x 5 1/2	25.6	L	PC	K-P	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Clydesdale 9	146	36x4	36x7	4 1/2 x 5 1/2	25.6	L	PC	Non	Lon	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875
Commerce S14	3250	140	36x8	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Concord G	3700	160	36x8 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Concord H	3700	160	36x8 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Corbett C	148	36x4 1/2	36x7 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Day-Elder H	144	34x4 1/2	34x5 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Day-Elder HST	144	34x4 1/2	34x5 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Day Elder HSM	144	34x4 1/2	34x5 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Day Elder HSMT	144	34x4 1/2	34x5 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos*	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	41.5	A	Own H	Del	Ros	Hoo	4875	
Defiance E2	144	35x5	36x7	3 3/4 x 5	22.5	L	PC	Non	Chi	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	29.0	A	Own H	Del	Ros	Hoo	3800
Denton 33	144	36x3 1/2	36x7	3 3/4 x 5	22.5	L	PC	Non	Chi	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	29.0	A	Own H	Del	Ros	Hoo	3800
Duplex A	2800	146	34x4 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Lon	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	29.0	A	Own H	Del	Ros	Hoo	4450
Duplex A	2800	146	34x4 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Lon	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.25	29.0	A	Own H	Del	Ros	Hoo	4450
Eagle 104	130	34x4 1/2	34x7 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Fagot 235	3750	150	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Goffredo in 41	1780	132	32x6 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Gramm-Kincaid 443N	2050	133	32x6 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Gramm-Kincaid 463N	2650	144	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Grass Premier 70	2975	152	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Guidler E	3350	152	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Guidler E6	3750	152	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Hahn K	2850	140	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Hugh HA	2085	118	34x5 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
International 43	136	30x4 1/2	30x4 1/2	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Kearns N1	3100	150	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Lehigh GP-2	2495	137 1/2	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
LeMon GP-2	195	32x6	34x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Macdonald 46	146 1/2	36x4	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Macdonald 46	146 1/2	36x4	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75	30.0	A	Own H	Del	Ros	Hoo	4400	
Macdonald 46	146 1/2	36x4	36x4	4 1/2 x 5 1/2	25.6	L	PC	Non	Ow	Str	G	Bos	Bos	Ow	P	Ow Y	A	4	Spi	Ow H	R	E	7.75								

[illegible]

Key of abbreviations, page 46

For full name and address of manufacturer and information regarding complete line see page 42

Trade Name and Model	General		Engine					Electrical System		Clutch		Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.) (stripped)	
	Tire Size	Horsepower	Bore and Stroke (Inches)	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System	Ignition System (Make)	Generator and Starter (Make)	Type	Make and Model	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location							
2½ Ton—Con'd																								
Service 61	164	36x8	4 1/2 x 5 1/2	28.9	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	7.75	41.5	A	Tim 1544B	She	Ros	Int	5785		
Standard 214-314 K	164	36x8	4 1/2 x 5 1/2	28.9	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	8.50	45.4	A	Tim 1542B	Amc	Gem	Day	5400		
Sterling DW-12	171	36x8	4 1/2 x 5 1/2	25.6	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1542B	Mat	Ros	Hoo	5400		
Sterling DW-14	171	36x8	4 1/2 x 5 1/2	25.6	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Mat	Ros	Hoo	5180		
Super-Truck 50	2805	156	36x4	34x8	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Union F.W. & F.W.	3150	156	36x4	34x8	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Union F.W. & F.W.	3150	156	36x4	34x8	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Victor 70	2650	156	36x4	34x8	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Wabash L	2400	156	36x4	34x8	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Ward LaFrance 2B	170	147	36x8	36x8	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
White 51	3750	170	36x8	36x8	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own	Str	Elis	Rem	P	Tim 6566	W	9.25	49.5	A	Tim 1544B	Amc	Ros	Day	5400
Winco CC	3000	135	34x5	34x5	4 1/2 x 5 1/2	29.0	L	PC	Non	Own														

Gasoline Tractor-Trucks

For full name and address of manufacturer and information regarding complete line see page 42

Key of abbreviations, page 46

Trade Name and Model	General			Engine				Electrical System			Clutch	Gearset		Rear Axle		Gear Ratios		Front Axle Make and Model	Springs (Make)	Steering Gear (Make)	Wheels (Make)	Rims (Make)	Chassis Weight (lbs.) (stripped)						
	Chassis Price	Tire Size %		Bore and Stroke (inches)	N.A.C.C. Rated H.P.	Valve Arrangement	Governor (Make)	Fuel System		Ignition System (Make)		Generator and Starter (Make)		Type	Make and Model	Location	No. of Forward Speeds							Universals (Make)	Make and Model	Type	Total Reduction in High	Total Reduction in Low	Brakes, Location
		Front (inches)	Rear (inches)					Carburetor (Make)	Fuel Feed																				
Gasoline Tractor-Trucks—Con'd																													
Kelly-Springfield K-76	36x10	36x5	36x10	4 1/2 x 5 1/2	28.9	L	Pie	PC Pie	Lon	Zen	G	Eis	Opt	B&B	P	B-L 55	A	4	Pet	Own K76	Mat	Ros	StM	Non	6400				
Kelly-Springfield K-41	36x12	36x5	36x12	4 1/2 x 6 1/2	32.4	T	PC Pie	PC Pie	Lon	Zen	G	Eis	Opt	B&B	P	B-L 60	A	4	Pet	Own K41	Per	Gem	Cla	Non	7740				
Kelly-Springfield K-42	36x15	36x5	36x15	4 1/2 x 6 1/2	32.4	T	PC Pie	PC Pie	Lon	Zen	G	Eis	Opt	B&B	P	B-L 60	A	4	Pet	Own K-42	Per	Gem	Cla	Non	8100				
Kelly-Springfield K-61	36x17	36x5	36x17	4 1/2 x 6 1/2	32.4	T	PC Pie	PC Pie	Lon	Zen	G	Eis	Opt	B&B	P	B-L 60	A	4	Pet	Own K-61	Per	Gem	Cla	Non	9025				
Kelly-Springfield K-100	36x14	36x6	36x14	4 1/2 x 6 1/2	32.4	T	PC Pie	PC Pie	Lon	Zen	G	Eis	Opt	B&B	P	B-L 60	A	4	Pet	Own AB	Mer	Own	.....	Non	9400			
Mack AC 7-Ton	36x4	36x4	36x4	4 1/2 x 5	28.9	L	PS	PS	Own	Str	G	Spl	N-E	N-E	C	10.5	51.1	B	4	Spi	Own AC	Mer	Own	Non			
Mack AC 10-Ton	36x5	36x5	36x5	5 x 6	40.0	L	PS	PS	Own	Str	G	Spl	N-E	N-E	C	10.5	51.1	B	4	Spi	Own AC	Mer	Own	Non			
Mack AC 13-Ton	36x6	36x6	36x6	5 x 6	40.0	L	PS	PS	Own	Str	G	Spl	N-E	N-E	C	10.5	51.1	B	4	Spi	Own AC	Mer	Own	Non			
Mack AC 15-Ton	36x7	36x7	36x7	5 x 6	40.0	L	PS	PS	Own	Str	G	Spl	N-E	N-E	C	10.5	51.1	B	4	Spi	Own AC	Mer	Own	Non			
Pierce-Arrow XB	36x5	36x5	36x5	4 1/2 x 5 1/2	25.6	T	FP	FP	Own	Str	G	Spl	N-E	N-E	C	11.5	73.5	D	4	Spi	Own AC	Mer	Own	Non	6280			
Pierce-Arrow RD	36x6	36x6	36x6	4 1/2 x 6 1/2	32.4	T	FP	FP	Own	Str	G	Spl	N-E	N-E	C	11.5	73.5	D	4	Spi	Own XB	W	1 1/2	62.0	Own	6890			
Pierce-Arrow RF	36x6	36x6	36x6	4 1/2 x 6 1/2	32.4	T	FP	FP	Own	Str	G	Spl	N-E	N-E	C	11.5	73.5	D	4	Spi	Own RF	W	1 1/2	62.0	Own	8490			
Saurer	40x7	40x7	40x7	4 1/2 x 7 1/2	29.3	L	PS	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	Own	4	Spi	Own RF	W	F	7.8	41.5	Own	9540		
Schacht 5-Ton	36x4	36x4	40x6 1/2	4 1/2 x 5	28.9	L	PC Dup	PC Dup	Own	Str	G	Bos	Non	R&B	P	Own 5	W	8	Spi	Own G	She	Own	.....	Non	7500			
Schacht 7-Ton	36x5	36x5	36x5	4 1/2 x 6	32.4	L	PC Dup	PC Dup	Own	Str	G	Bos	Non	R&B	P	Own 7	W	8	Spi	Own G	She	Own	.....	Non	6400			
Schacht 10-Ton	40x12	36x6	40x12	4 1/2 x 6	32.4	L	PC Dup	PC Dup	Own	Str	G	Bos	Non	R&B	P	Own 10	R	14.0	8	Spi	Own	Own	.....	Non	8200			
Schacht 13-Ton	40x12	36x6	40x12	4 1/2 x 6	32.4	L	PC Dup	PC Dup	Own	Str	G	Bos	Non	R&B	P	Own 13	R	14.0	8	Spi	Own	Own	.....	Non	8400			
Schacht 15-Ton	40x12	36x6	40x12	4 1/2 x 6	32.4	L	PC Dup	PC Dup	Own	Str	G	Bos	Non	R&B	P	Own 15	R	14.0	8	Spi	Own	Own	.....	Non	9000			
Service 61	36x8	36x8	36x8	4 1/2 x 5 1/2	28.9	L	PC Non	PC Non	.....	Str	V	Eis	Rem	R&B	P	B-L 100	W	7.75	4	Spi	Tim 1544B	She	Ros	Int	5785			
Service 81	36x10	36x8	36x10	4 1/2 x 5 1/2	28.9	L	PC Non	PC Non	.....	Str	V	Eis	Rem	R&B	P	B-L 100	W	7.75	4	Spi	Tim 1632B	She	Ros	Int	7000			
Service 103	36x12	36x8	36x12	4 1/2 x 5 1/2	28.9	L	PC Non	PC Non	.....	Str	V	Eis	Rem	R&B	P	B-L 100	W	7.75	4	Spi	Tim 1732B	She	Ros	Int	9150			
Sterling DWS-10T	36x8	36x8	36x8	4 1/2 x 5 1/2	30.6	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 6760	She	Ros	Int	4680			
Sterling EW-15T	40x10	36x5	40x10	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1544B	Mat	Ros	Hoo	7775			
Sterling EW-20T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	8675			
Sterling FWS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	9175			
Sterling ECS-20T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	8100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	8400			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B	Mat	Ros	Hoo	10100			
Sterling ECS-24T	40x12	36x6	40x12	4 1/2 x 6 1/2	32.4	L	PC Wau	PC Wau	Own	Zen	V	Eis	.....	H-S	O	Own	W	10.25	97.3	4	Tim 1632B							

Trade Name	Capacity	Name	Address
Biederman	1, 1½, 1½, 2½, 3½, 5	Biederman Motors Co.	Cincinnati, Ohio
Bridgeport	1½, 2½, 4-Bus	Bridgeport Motor Truck Corp.	Stratford, Conn.
Brinton	1½, 2½	Brinton Motor Truck Co.	Philadelphia, Pa.
Brookway	1½, 2, 3, 4, 5-Bus	Brookway Motor Truck Corp.	Cortland, N. Y.
Diamond T	1, 1½, 1½, 2½, 3½, 5	Diamond T Motor Car Co.	Chicago, Ill.
Dixon	1½, 2, 2½, 3½, 5	Dixon Motor Truck Co.	Altoona, Pa.
Dodge Brothers	3	Dodge Brothers, Inc.	Detroit, Mich.
Dorris	1, 2½, 4-Bus	Dorris Motors, Inc.	St. Louis, Mo.
Double Drive	3	Double Drive Truck Co.	Benton Harbor, Mich.
Duplex	1, 1½, 2, 3, 3½-Bus	Duplex Truck Co.	Lansing, Mich.
Eagle	1½, 2½-3, 3½-5	Eagle Motor Truck Corp.	St. Louis, Mo.
F. W. D.	3	Four-Wheel Drive Auto Co.	Clintonville, Wis.
Fageol	1½, 2, 3, 4, 6-Bus	Fageol Motors Co.	Oakland, Cal.
Federal	1, 1½, 1½, 2½, 4, 5-Bus, T. T.	Federal Motor Truck Co.	Detroit, Mich.
Fifth Avenue	Bus	Fifth Avenue Coach Co.	New York City
Fisher Fast Freight	1½	Standard Motor Truck Co.	Detroit, Mich.
Flint Road King	1½	Flint Motor Co.	Flint, Mich.
Ford	1	Ford Motor Co.	Highland Park, Mich.
Front Drive	1½	Double Drive Truck Co.	Benton Harbor, Mich.
G. M. C	1, 1½, 2½, 3½-5-T. T.	General Motors Truck Co.	Pontiac, Mich.
Garford	1, 1½, 2½, 4, 5, 7½-T. T. Bus	Garford Motor Truck Co.	Lima, Ohio
Gary	1, 2½, 3, 3½, 5-Bus	Gary Motor Corp.	Gary, Ind.
Gotfredson	1, 1½, 2, 2½, 3, 4, 5	Gotfredson Truck Corp.	Detroit, Mich. & Walkerville, Ont.
Graham Bros.	1, 1½-Bus	Graham Brothers	Detroit, Mich.
Gramm-Bernstein	1, 1½, 1½, 2½, 3, 4, 5	Gramm-Bernstein Motor Truck Co.	Lima, Ohio
Gramm & Kincaid	1, 1½, 1½, 2, 2½, 3, 4, 5	Gramm & Kincaid Motors, Inc.	Lima, Ohio
Grass Premier	1, 1½, 2, 2½, 3½	Grass Premier Truck Co.	Sauk City, Wis.
Gulder	1½, 1½, 2, 3½, 5, 6-Bus	Gulder Engineering Co.	Poughkeepsie, N. Y.
Hahn	1½, 1½, 2, 2½, 3, 5-Bus	Hahn Motor Truck Co.	Hamburg, Pa.
Harvey	2½, 3½, 5-T. T.	Harvey Motor Truck Co.	Harvey, Ill.
Hug	1½, 2, 2½	Hug Company	Highland, Ill.
Indiana	1½, 2½, 3½	Indiana Truck Corp.	Marion, Ind.
International	1, 1½, 2, 3, 5-T. T. Bus	International Harvester Co. of America	Chicago, Ill.
Kearns	1½, 2, 2½, 3½, 5	Kearns Duglie Motors Co.	Lewistown, Pa.
Kelland (Elec.)	1½, 2, 2½, 3½, 5	Kelland Motor Car Co.	Newark, N. J.
Kelly-Springfield	1½, 2½, 3½-5-7	Kelly-Springfield Motor Truck Co.	Springfield, Ohio
Kenworth	1, 1½, 2, 3, 4, 5	Kenworth Motor Truck Corp.	Seattle, Wash.
King Zeitler	1, 1½, 2½, 3½, 5	King Zeitler Co.	Chicago, Ill.
Kissel	1, 1½, 4, 5-Bus	Kissel Motor Car Co.	Hartford, Wis.
Kleiber	1, 1½, 2½, 3, 3½, 5	Kleiber Motor Truck Co.	San Francisco, Cal.
Lange	1½, 2½, 3, 3½	Lange Motor Truck Co.	Pittsburgh, Pa.
Lansden (Elec.)	3, 1, 2, 3½, 5, 6	Lansden Company	Danbury, Conn.
Larrabee-Deyo	1, 1½, 1½, 2½, 3½, 5	Larrabee-Deyo Motor Truck Co., Inc.	Binghamton, N. Y.
Lehigh	1, 2, 2½, 3½	The Lehigh Co.	Allentown, Pa.
Lemmon	1, 1½, 2, 2½, 3½, 5	Nelson Le-Moon Truck Co.	Chicago, Ill.
Luedinghaus	1, 1½, 2½, 3½, 5	Luedinghaus-Espenschied Wagon Co.	St. Louis, Mo.
Maccar	1½, 2, 3, 4, 5	Maccar Truck Co.	Scranton, Pa.
Mack	1½, 2, 2½, 3½, 5, 6½, 7½-Bus	International Motor Co.	New York, N. Y.
Master	1, 1½, 1½, 2½, 3, 3½, 4, 5, 5½-Bus	Master Motor Truck Mfg. Co.	Chicago, Ill.
Menominee	1, 1½, 1½, 2½	Menominee Motor Truck Co.	Clintonville, Wis.
Moreland	1, 1½, 2, 2½, 3, 3½, 5	Moreland Motor Truck Co.	Burbank, Cal.
Day-Elder	1½, 2, 2½, 3, 4, 5-Bus	Day-Elder Motors Corp.	Newark, N. J.
Defiance	1½, 1½, 2, 3	Century Motor Truck Co.	Defiance, Ohio
Denby	1½, 2, 2½, 3, 4, 5-Bus	Denby Motor Truck Corp.	Detroit, Mich.
Nash	1, 2	Nash Motors Co.	Kenosha, Wis.
National	2, 3, 3½	National Steel Car Corp., Ltd.	Hamilton, Ont., Canada
Noble	1, 1½, 2, 2½, 3, 3½, 4	Noble Motor Truck Co.	Kendallville, Ind.
Northway	1½, 3, 5	Northway Motors Corp.	Natick, Mass.
O. B. (Elec.)	2, 3½, 5	O. B. Electric Vehicles, Inc.	Long Island City, N. Y.
O. K.	1, 1½, 2, 2½, 3½	O. K. Mfg. Co.	Okay, Okla.
Ogden	1, 1½, 2, 2½, 3½, 5	Ogden Truck Co.	Chicago, Ill.
Oshkosh	2, 2½, 4	Oshkosh Motor Truck Mfg. Co.	Oshkosh, Wis.
Overland	1½	Willis-Overland Co.	Toledo, Ohio
Patriot	1½, 1½, 2, 2½, 3	Patriot Mfg. Co.	Havlock, Neb.
Pendell	1½	Mechanics Mfg. Co.	Los Angeles, Cal.
Penn	1, 2	Penn Motors Corp.	Philadelphia, Pa.
Pierce-Arrow	2, 3, 4, 5, 6, 7½, T. T.	Pierce-Arrow Motor Car Co.	Buffalo, N. Y.
Rainier	¾, 1, 1½, 2, 2½, 3½, 6	Rainier Trucks, Inc.	Long Island City, N. Y.
Rehberger	2, 3, 4, 5	Arthur Rehberger & Son, Inc.	Newark, N. J.
Reo	1½, 2-Bus	Reo Motor Car Co.	Lansing, Mich.
Republic	1½, 1½, 2, 3, 4	Republic Motor Truck Co., Inc.	Alma, Mich.
Rowe	2½, 3, 4, 5	Rowe Motor Mfg. Co.	Lancaster, Pa.
Ruggles	1, 1½, 1½, 2, 2½, 3	Ruggles Motor Truck Co.	Saginaw, Mich.
Rumely	1½	Advance Rumely Thresher Co.	Laporte, Ind.
Safeway Six Wheeler	Bus	The Six Wheel Co.	Philadelphia, Pa.
Sandow	1, 1½, 2, 2½, 3½, 5	Sandow Motor Truck Co.	Chicago Heights, Ill.
Sanford	1½, 1½, 2½, 3½, 5	Sanford Motor Co.	Syracuse, N. Y.
Saurer	6½, T. T.	Adolph Saurer, Inc.	New York, N. Y.
Schacht	1, 1½, 2, 2½, 3, 3½, 4, 5, 7½-Bus	G. A. Schacht Motor Truck Co.	Cincinnati, Ohio.
Selden	1½, 2, 2½, 2½, 3, 3½, 4, 5-Bus	Selden Truck Corp.	Rochester, N. Y.
Service	1, 1½, 2½, 3½, 5	Service Motors, Inc.	Wabash, Ind.
Standard	1½, 1½, 2½, 3½, 6	Standard Motor Truck Co.	Detroit, Mich.
Star	3	Durant Motor Co. of N. J.	Elizabeth, N. J.
Steinmetz (Elec.)	1, 1½, 1½, 2, 2½, 3	Steinmetz Electric Motor Car Corp.	Arlington, Baltimore, Md.
Sterling	1½, 2, 2½, 3, 4, 5, 10-T. T. Bus	Sterling Motor Truck Co.	Milwaukee, Wis.
Stewart	1, 1½, 1½, 2, 2½, 3	Stewart Motor Corp.	Buffalo, N. Y.
Stoughton	1½, 1½, 2, 3	Stoughton Wagon Co.	Stoughton, Wis.
Studebaker	Bus	Studebaker Corp.	South Bend, Ind.
Super Truck	2½, 3, 3½, 5	O'Connell Motor Truck Co.	Waukegan, Ill.
Traffic	1½, 2, 3	Traffic Motor Truck Corp.	East St. Louis, Ill.
Traylor	1½, 3, 5	Traylor Eng. & Mfg. Co.	Allentown, Pa.
Twin City	2½, 3½-Bus	Minneapolis Steel & Machinery Co.	Minneapolis, Minn.
U. S.	1½, 1½, 2, 2½, 3, 4, 5-7	United States Motor Truck Co.	Cincinnati, Ohio
Union	1½, 2½, 4, Bus	Union Motor Truck Co.	Ray City, Mich.
United	1, 1½, 1½, 2, 2½, 3, 5	United Motor Products Co.	Grand Rapids, Mich.
Upperco	Bus	Aeromarine Plane & Motor Co., Inc.	Keyport, N. J.
Victor	1½, 1½, 2, 2½, 3½, 5, 6	Victor Motors, Inc.	East St. Louis, Ill.
Wachusett	1, 1½, 2, 2½, 3	Wachusett Motors, Inc.	Fitchburg, Mass.
Walker (Elec.)	1, 1½, 2, 2½, 3, 3½, 5	Walker Vehicle Co.	Chicago, Ill.
Walter (Elec.)	1, 1½, 2, 2½, 3, 3½, 5	Walter Motor Truck Co.	Long Island City, N. Y.
Ward (Elec.)	750 lbs. to 7 ton	Ward Motor Vehicle Co.	Mt. Vernon, N. Y.
Ward La France	2½, 3½, 5, 7-Bus	Ward La France Truck Corp.	Elmira, N. Y.
White	¾, 2, 2½, 3½, 5-Bus	White Co.	Cleveland, Ohio
Whitcha	1½, 2, 3	Whitcha Motors Co.	Wichita Falls, Tex.
Wilcox	1, 1½, 2½, 3½, 5	Wilcox Trux, Inc.	Minneapolis, Minn.
Winther	1½, 2½, 3, 3½, 5	Winther Motor Co.	Kenosha, Wis.
Witt Will	1½, 2, 2½, 3, 4, 5	Witt Will Co., Inc.	Washington, D. C.
Yellow Cab	¾, 1-Bus	Yellow Truck & Coach Mfg. Co.	Chicago, Ill.

Motor Bus Chassis Designed Exclusively

For Other Chassis Which Are Recommended and Adaptable for Bus Use,

Line Number	MAKE AND MODEL	GENERAL							ENGINE							ELECTRICAL SYSTEM							NORMAL SPEED	
		Seating Capacity	Chassis Price	Weights			Wheelbase	Tread		Make and Model	Number of Cylinders Bore and Stroke	Rated Horse Power N.A.C.C.	Valve Arrangement	Oiling System	Radiator Make	Fuel System		Ignition System Make	Generator and Starter Make	Battery		Voltage and Amp. Hr. Cap.	High M. P. H.	Low M. P. H.
				Chassis Only	Chassis with Body	Recommended Body Allowance		Front	Rear							Carburetor Make	Fuel Feed			Make	Model			
1	Ace C.	30	4850	6500	11500	5000	204	70	80 1/2	Cont 7T	6-4 1/2 x 5 1/2	40.8	L	PC	Own	Zen	V	Eis	Rem	USL	3HVX8X	6-110	6.0	35
2	Ace 116.	18	4910	8460	11500	5000	180	58	68	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Per	Zen	V	Eis	Del	WIL	SJRT-6	6-153	4.5	45
3	Ace 118.	22	5110	9280	11500	5000	205	58	68	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Pen	Zen	V	Eis	Del	WIL	SJRT-6	6-153	4.5	45
4	Bridgeport 45.	30	3850	5500	11500	5000	178	60	72	Buda EBU	6-4 1/2 x 5 1/2	28.1	L	PC	Own	Zen	V	Eis	Del	WIL	SJRT-6	6-153	4.5	45
5	Brookway FB.	18	3850	6350	2500	153	8	8	8	Wise SU	6-3 3/4 x 5 1/2	25.6	L	FP	G&O	en	V	Eis	Del	WIL	SJRT-6	6-153	4.5	45
6	Brookway EB4.	18	4000	6400	2500	153	8	8	8	Wise 6Y	6-3 3/4 x 5 1/2	25.6	L	FP	G&O	en	V	Eis	Del	WIL	SJRT-6	6-153	4.5	45
7	Brookway H.	22	4975	7975	3000	164	60	65 1/2	65 1/2	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	FP	G&O	en	V	Eis	Del	WIL	SJRT-6	6-153	4.5	45
8	Brookway I.	22	5585	10585	4000	185	16 1/2	58 1/2	58 1/2	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	FP	G&O	en	V	Eis	Del	WIL	SJRT-6	6-153	4.5	45
9	Clinton 65B.	30	4075	5925	8700	2725	184	58 1/2	58 1/2	Buda EBU	6-4 1/2 x 5 1/2	28.0	L	PC	Own	Zen	V	Bos	Bos	Pol	615KPN	6-180	3.0	30
10	Clinton 65BS.	35	4800	6600	9600	3000	220	68	76 1/2	Buda YBU	6-4 1/2 x 5 1/2	32.4	L	PC	Own	Zen	V	Bos	Bos	Pol	615KPN	6-180	3.0	35
11	Commerce 60.	25	4800	6600	9600	3000	229	68	75	Cont 6H	6-3 3/4 x 5 1/2	33.7	L	PC	Lon	Zen	V	Bos	Bos	Wil	SJRT 4	6-153	35	6.0
12	Commerce 65.	29	4800	6600	9600	3500	242	68	75	Cont 14H	6-4 1/2 x 5 1/2	48.6	L	PC	Lon	Zen	V	Bos	LN	Wil	SJRT 30	12-153	35	5.0
13	Concord	25	4800	6600	9600	3000	242	58 1/2	58 1/2	Buda Bus	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	Bos	LN	Exi	6LXRE13-3	12-240	42	6.5
14	Day-Elder 20.	25	5200	7700	2500	168	36	58	58 1/2	Buda KBU	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	Bos	LN	Exi	6LXRE13-3	12-240	42	6.5
15	Day-Elder 25.	25	5200	7700	2500	168	36	58	58 1/2	Buda KBU	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	Bos	LN	Exi	6LXRE13-3	12-240	42	6.5
16	Day-Elder 30.	30	5200	7700	2500	168	36	58	58 1/2	Buda KBU	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	Bos	LN	Exi	6LXRE13-3	12-240	42	6.5
17	Denby 36.	30	7000	10500	3500	216	74	74	74	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Lon	Zen	V	RBo	RBo	Wil	SJRT 30	12-153	30	...
18	Dorris M4.	18	3535	4200	7700	3300	176	57	57	Own	4-4 1/2 x 5 1/2	28.9	L	PC	Mod	Str	V	Bos	Bos	Wil	SJRT5	6-139	40	5.0
19	Dorris L-6.	25	5450	10300	3000	224	72 1/2	68	68	Own	4-4 1/2 x 5 1/2	28.9	L	PC	Mod	Str	V	Bos	NE	Wil	SJRT30	12-135	40	5.0
20	Duplex FB.	23	5500	10300	3000	224	72 1/2	68	68	Buda EBU	6-4 1/2 x 5 1/2	28.1	L	PC	Mod	Str	V	Eis	NE	Exi	6LXRE13-3	12-240	35	7.0
21	Flagel Parlor Car.	2	6000	6770	10550	30	12	78 1/2	78 1/2	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Own	Zen	V	Eis	NE	Exi	6LXRE13-3	12-240	35	7.0
22	Flagel Street Car.	3	5300	6480	10000	30	12	78 1/2	78 1/2	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Own	Zen	V	Eis	NE	Exi	6LXRE13-3	12-240	35	7.0
23	Federal	25	5850	8530	2780	172	67 1/2	71 1/2	71 1/2	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Own	Zen	V	Eis	NE	Exi	6LXRE13-3	12-240	35	7.0
24	Fifth Ave. J.	25	5850	8530	2780	172	67 1/2	71 1/2	71 1/2	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Own	Zen	V	Eis	NE	Exi	6LXRE13-3	12-240	35	7.0
25	Fifth Ave. L.	55	6850	12040	5190	74 3/4	74 3/4	74 3/4	74 3/4	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Own	Zen	V	Eis	NE	Exi	6LXRE13-3	12-240	35	7.0
26	Garford 51D.	17	3600	6000	2400	180	58	59 1/2	59 1/2	Wise Y	6-3 3/4 x 5 1/2	27.3	L	FP	Lon	Zen	V	AL	AL	Wil	SJRT-5	6-135	35	7.3
27	Garford KB.	29	6900	11300	1400	220	72	76	76	Wise Z	6-3 3/4 x 5 1/2	27.3	L	FP	Lon	Zen	V	AL	AL	Wil	SJRT-30	12-153	57	11.9
28	Garford CB.	29	6900	11300	1400	220	72	76	76	Wise Z	6-3 3/4 x 5 1/2	27.3	L	FP	Lon	Zen	V	AL	AL	Wil	SJRT-30	12-153	57	11.9
29	Gary 45B.	40	5500	9000	3000	220	68	72	72	Bud GL6	6-4 1/2 x 5 1/2	18.6	L	PC	Chi	Str	V	Rem	Rem	Exi	6LXR11-1	12-90	30	4.0
30	Graham Bros. YB.	21	1600	3700	6200	2500	158	56	56	Dudge	4-3 1/2 x 4 1/2	24.0	L	PS	McC	Str	V	NE	NE	Exi	6LXR11-1	12-90	30	4.0
31	Gramm & Kincaid 6-15-3	15	1755	3100	5100	2000	164	57	58	Cont SR	6-3 3/4 x 5 1/2	27.3	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
32	Gramm & Kincaid 6-20-3	20	2760	3800	6300	2500	184	57	58	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
33	Gramm & Kincaid 6-25-3	25	3100	3900	6400	2500	184	57	58	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
34	Grass Premier ZR3.	22	2500	3150	5600	3500	200	70	70 1/2	Wau	6-4 1/2 x 5 1/2	15.9	L	PC	Chi	Str	V	AL	AL	USL	6-135	50	5.0	
35	Gullder 20.	17	3500	6000	2400	180	58	58 1/2	58 1/2	Cont SR	6-3 3/4 x 5 1/2	27.3	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
36	Gullder 26.	21	3650	6000	2400	180	58	58 1/2	58 1/2	Cont SR	6-3 3/4 x 5 1/2	27.3	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
37	Gullder 36.	25	4850	8000	3000	220	68	72	72	Buda Bus	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
38	Hahn	20	4600	8200	2400	180	58	58 1/2	58 1/2	Cont SR	6-3 3/4 x 5 1/2	27.3	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
39	Hahn	20	4600	8200	2400	180	58	58 1/2	58 1/2	Cont SR	6-3 3/4 x 5 1/2	27.3	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
40	International SL.	16	4500	7700	2500	168	36	58	58 1/2	Lye Spec	4-3 1/2 x 4 1/2	19.6	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
41	International SL.	16	4500	7700	2500	168	36	58	58 1/2	Lye Spec	4-3 1/2 x 4 1/2	19.6	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
42	Larrabee X-2, L-10.	15	1965	3450	4850	1400	155	56	56	Cont SR	6-3 3/4 x 5 1/2	27.3	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
43	Larrabee XH4.	25	6980	10000	3000	220	64	72	72	Cont 6B	6-3 3/4 x 5 1/2	33.7	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
44	Macear	25	7500	12000	4500	228 3/4	73	77	77	Buda Bus	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
45	Maek AB.	25	7500	12000	4500	228 3/4	73	77	77	Buda Bus	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
46	Maek AB.	25	7500	12000	4500	228 3/4	73	77	77	Buda Bus	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
47	Maek AB.	25	7500	12000	4500	228 3/4	73	77	77	Buda Bus	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
48	Maek AB.	25	7500	12000	4500	228 3/4	73	77	77	Buda Bus	6-4 1/2 x 5 1/2	38.0	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
49	Menominee T.	11	4290	7500	3200	175	60	58	58 1/2	Wise Y	6-3 3/4 x 5 1/2	27.3	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
50	Menominee DB.	11	4290	7500	3200	175	60	58	58 1/2	Wise Y	6-3 3/4 x 5 1/2	27.3	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
51	Moreland RC.	21	2280	3850	5850	2000	180	56	57 1/2	Aisc TAF	4-4 1/2 x 5 1/2	25.6	L	PC	Own	Zen	V	AL	AL	USL	6-135	50	5.0	
52	Moreland EC.	21	1780	3590	5590	1700	178	51	58	Cont 6B	6													

sively for Passenger Transportation

See Models Having Sign (\$) in the "COMMERCIAL CAR SPECIFICATIONS"

Line Number	TRANSMISSION				REAR AXLE				TIRES AND WHEELS				DIMENSIONS (In.)									
	Clutch	Gearset	Universal	Number of Forward Speeds	Make	Make and Model	Final Drive	Type	Gear Ratio		Service Brake Type and Location	Front Axle Make and Model	Steering Gear Make	Tires (In.)		Wheels—Make	Rims—Make	Floor Height	Turning Radius	Overall		Clearance from Ground
									Total in High	Total in Low				Front	Rear					Length	Width	
1	D. B. L.	B. L. 60	U	4	U-M	Tim 6516	Wo	F	5.4	26.6	I-R	Tim 1550	Ros	36x6	36x6†	Day	Fir	27½	34	316	90	9½
2	D. B. L.	B. L. 51	U	4	Blo	Cla B6000	Wo	F	5.5	26.4	I-R	Shu	Ros	34x7*	34x7*	Smi	Fir	21½	259	83½	83½	9½
3	D. B. L.	B. L. 51	U	4	Blo	Cla B6000	Wo	F	5.5	26.4	I-R	Shu	Ros	34x7*	34x7*	Smi	Fir	21½	259	83½	83½	9½
4	D. B. L.	B. L. 50	U	4	Spi	Tim 6560	Wo	F	6.7	...	I-R	She Spec	Ros	36x6*	36x6†	Bud	Fir	31½	28	243	64	9
5	D. B. L.	B. L. 30	U	3	Spi	Col 53000	B	F	5.1	...	E-R	Col 5200	Gem	32x6	36x6†	Van	Fir	28½	28	243	64	9
6	D. B. L.	B. L. 30	U	3	Spi	Col 53000	B	F	5.1	...	E-R	Col 5200	Gem	32x6	36x6†	Bud	Fir	28½	30	256	74	8½
7	D. B. L.	B. L. 55	U	4	Spi	Huck 25	B	F	6.6	...	...	Shu 5550	Ros	32x6	36x6†	Bud	Fir	27½	32	295½	90	7½
8	D. B. L.	B. L. 55	U	4	Spi	Tim 6516	Wo	F	7.7	...	...	Shu 610B	Ros	36x6	36x6†	Bud	Fir	30	37	270	75½	9½
9	D. B. L.	B. L. 55	U	4	M-E	Tim 3566	Wo	F	6.5	34.8	I-R	Tim 1544B	Ros	36x6*	36x6†	Bud	Fir	26	40	286	90	7
10	D. B. L.	B. L. 55	U	4	M-E	Tim 6516	Wo	F	6.7	36.1	I-R	Tim 1550	Ros	36x6	36x6†	Bud	Fir	20½	...	330	88½	7
11	D. B. L.	B. L. 60H	U	4	Blo	Tim 6516	Wo	F	6.8	27.2	I-R	Tim 1550	Ros	36x6	36x6†	Bud	Fir	20½	...	343	88½	7
12	D. B. L.	B. L. 70	U	4	Blo	Tim 6516	Wo	F	5.4	21.6	I-R	Tim 1550	Ros	36x6	36x6†	Bud	Fir	28	...	...	...	...
13	D. B. L.	B. L. 51	U	3	Spi	Tim 6570S	Wo	F	6.0	32.1	I-R	Shu 5550	Ros	36x6*	38x7*	Van	Fir	32	30	246½	70½	11
14	D. B. L.	B. L. 35	U	3	Spi	Tim 6462	Wo	F	6.5	21.8	I-R	Tim 1526	Gem	36x6*	40x8*	Bud	Fir	32	30	260	75½	12
15	D. B. L.	B. L. 51	U	4	Spi	Tim 6566	Wo	F	6.7	36.1	I-R	Tim 1544	Gem	36x6*	36x6*	Bud	Fir	25	27	293	90	10½
16	D. B. L.	B. L. 51	U	4	Spi	Huck 85	Wo	F	5.7	30.6	I-R	She D 445	Ros	36x6*	36x6†	Bud	Fir	21	34	294	91	8
17	D. Ful	Ful GU14	U	4	Blo	Cla 3D	Wo	F	7.0	32.6	I-R	Shu 610B	Ros	32x6	32x6†	Bud	...	23½	62	264	84	9
18	Own	B. L. 51	U	4	Spi	Wis DR	B	F	4.6	24.6	1A	Tim	Ros	34x7*	36x8*	Bud	...	24	36	309	90	8
19	D. B. L.	B. L. 55	U	4	Spi	Wis	R	F	4.8	...	I-R	Tim 1560	Ros	34x5	34x5†	Mot	Fir	27	28	268	82	9
20	D. B. L.	B. L.	U	4	Pet	Vul 4	Wo	F	6.5	32.1	I-R	Shu	Ros	36x6*	36x6†	Bud	...	20½	38½	342	89	7½
21	D. B. L.	B. L. 55	U	4	Spi	Tim 65190	Wo	F	4.6	19.7	I-R	Tim 1550	Ros	36x6*	36x6†	Bud	...	22½	38	339	89	7½
22	D. B. L.	B. L. 55	U	4	Spi	Tim 65190	Wo	F	4.6	19.7	I-R	Tim 1524	Ros	36x6*	36x6†	Bud	...	22½	38	339	89	7½
23	P. B. & B.	Det R400	U	4	Spi	Tim 6566	Wo	F	6.7	37.8	...	Own	Gem	36x6*	36x6†	Smi	Fir	30	28	266½	...	10
24	P. Own	Own J	U	4	Sne	Tim 6412	Wo	F	5.4	21.6	I-R	Tim 1523	Ros	36x6*	36x6†	Bud	...	29½	33	277	87½	7
25	P. Own	Own L	U	4	Sne	Own L	Wo	F	6.6	...	E-D	Own L	Ros	36x5†	36x5†	Own	...	25	33	296	90	6
26	P. Own	Own 51D	U	4	Spi	Tim 6516	Wo	F	5.4	26.1	I-R	Tim 1550	Ros	36x6*	36x6†	Bud	...	28½	30	295	91	7
27	D. B. L.	B. L. 31	U	4	Spi	Tim 5516H	Wo	F	5.3	21.3	I-F	Tim 2341H	Lav	32x6	32x6†	Day	Fir	23	28	...	84	6½
28	D. B. L.	B. L. 60S	U	4	Spi	Tim	Wo	F	4.8	16.7	I-F	Tim 1560C	Ros	36x6*	36x6†	Bud	Fir	26	...	298	...	...
29	Ful	Ful	U	3	UP	Own	SP	F	6.3	26.3	I-R	Own	Dodge	32x6	34x7*	Smi	Fir	26	29½	248	86	8
30	D. Dodge	Dodge	U	3	UP	Own	SP	F	6.3	26.3	I-R	Own	Dodge	32x6	34x7*	Smi	Fir	26	29½	248	86	8
31	Cov	Cov	U	3	Thei	Eat	B	F	5.33	21.3	I-F	Col	Ros	30x5	30x5	Smi	Fir	21	28	247	...	9
32	Cov	Cov	U	3	Thei	Eat	B	F	5.33	21.3	I-F	Col	Ros	32x6	32x6	Smi	Fir	22	28	247	...	9
33	Cov	Cov	U	3	Thei	Wis	B	F	5.33	21.3	I-F	Col	Ros	32x6	34x7*	Smi	Fir	22	33	298	89	7
34	D. B. L.	B. L. 51	U	3	Spi	Tim 6566	Wo	F	4.6	...	I-F	Con	Ros	32x6	32x6†	Van	Fir	22	33	298	89	7
35	D. B. L.	B. L. 31	U	3	Spi	Tim 6566	Wo	F	4.6	...	I-F	Con	Ros	36x5	33x5†	Bud	...	25	...	...	...	...
36	D. B. L.	B. L. 31	U	3	Spi	Wis 660	R	F	6.0	...	...	Shu 5410	Ros	32x6	32x6†	Bud	...	26	...	...	...	...
37	D. B. L.	B. L. 51	U	4	Spi	Wis	...	F	5.0	...	I-R	She D484	Ros	32x6	32x6	Bud	...	26	...	...	...	...
38	D. B. L.	B. L. 51	U	4	Spi	Tim	...	F	6.0	...	I-R	She D445	Ros	34x7	34x7*	Bud	Fir	25	20	250	84	8½
39	D. B. L.	B. L. 60	U	4	Spi	Tim	...	F	6.0	...	I-R	She D445	Ros	34x7	34x7*	Bud	Fir	30	30	336	90	9
40	D. Mun	Mun	U	3	Own	Eat	...	F	5.4	...	I-R	Eat	Own	33x5	33x5	Own	...	24	...	252	76	8
41	D. B. L.	B. L. 35	U	4	Sne	Sal D	Wo	F	5.8	19.1	I-R	Shu 610	Ros	34x7*	34x7*	Whi	Gdy	24	27	222	70	11
42	D. B. L.	B. L. 31	U	3	Sne	Sal D	Wo	F	5.5	27.6	E-R	Sal	Gem	34x5	34x5	Ind	Fir	29	28	222	86	9
43	D. B. L.	B. L. 31	U	3	Spi	She	Wo	F	5.5	26.4	I-R	Shu 5550B	Ros	32x6	32x6†	Bud	Fir	25	28	222	86	9
44	D. B. L.	B. L. 55	U	4	Spi	Huck 85	R	F	6.65	35.8	I-R	She D 445	Ros	34x7	34x7†	Bud	Fir	27½	41	312½	92½	7½
45	D. Own	Own AB	U	4	Spi	Own AB	R	F	Opt	Opt	I-R	Own AB	Own	32x6†	32x6†	Bud	Fir	25½	28½	228	78½	8½
46	D. Own	Own AB	U	4	Spi	Own AB	R	F	Opt	Opt	I-R	Own AB	Own	32x6†	32x6†	Bud	Fir	25½	32	317½	78½	8½
47	D. Own	Own AB	U	4	Spi	Own AB	R	F	Opt	Opt	I-R	Own AB	Own	32x6†	32x6†	Bud	Fir	27½	32½	307½	78½	10½
48	D. Ful	Ful GU7	U	4	Spi	Wis 25A	R	F	7.0	...	...	Shu 610	Ros	36x6	36x6†	Ind	Fir	26	33½	...	...	10
49	D. Det	Cot AAU	U	3	Spi	Wis	R	F	6.1	32.0	I-R	Shu	Ros	32x6*	32x6†	Ind	Fir	23½	28	256	86	10
50	D. Det	Cot AU	U	3	Pet	Wis 120K	Wo	F	5.1	22.0	E-R	Tim 1550	Ros	32x6	32x6	Own	Gdy	23½	...	...	...	7
51	D. B. L.	B. L. 30	U	4	Pet	Tim 5512	Wo	F	6.0	32.1	I-R	Tim 1250	Ros	32x6	32x6	Own	Gdy	23½	...	...	...	8½
52	D. B. L.	B. L. 51	U	4	Pet	Tim 6410	Wo	F	6.0	32.1	I-R	Tim 1550	Ros	32x6	32x6	Own	Gdy	23½	...	...	...	9
53	D. B. L.	B. L. 51	U	4	Pet	Tim 6511	Wo	F	6.0	32.0	E-D	Own	Own	36x6*	36x6†	Bud	...	28	37½	282	89½	8
54	Own	Own	U	4	Spi	Own	Wo	F	6.0	32.0	E-D	Own	Own	36x6*	36x6†	Bud	...	28	40	303	89½	8
55	Own	Own	U	4	Spi	Own	Wo	F	6.0	32.0	E-D	Own	Own	36x6*	36x6†	Bud	...	28½	31	278	84	8½
56	Own	Own W	U	3	Own	Own W	SP	F	5.7	21.0	E-R	Own W	Own	32x6	34x7	Bud	...	28½	31	264½	88½	7½
57	Own	Own W	U	3	Own	Own W	SP	F	6.2	25.0	E-R	Own W	Own	32x6	32x6†	Bud	...	28½	31	270½	67½	7½
58	Ful	Ful	U	4	Spi	Eat	...	F	5.50	27.3	E-D	Eat	Jac	34x7	34x7†	Van	Fir	21	28	272	90	9
59	D. B. L.	B. L.	U	4	...	Wis 460	S	F	5.83	23.3	...	Shu 5550	Jac	30x5	30x5	Bud	Fir	24	28	287	90	9
60	D. B. L.	B. L.	U	4	...	Wis 66	R	F	5.83	23.3	...	Shu 5550B	Jac	32x6	32x6	Bud	Fir	24	32	310	90	9
61	D. B. L.	B. L. 60																				

KEY OF ABBREVIATIONS

Wheelbase:

- *—More than one wheelbase furnished.

Tires:

- §§—Unless marked otherwise all tires are solids.
 *—Pneumatics standard equipment.
 †—Pneumatics at Extra Cost.
 ‡—Dual pneumatics standard.
 *—Dual pneumatics extra cost.
 †—Dual solids.

Engine:

- Bud—Buda Co., Harvey, Ill.
 Con—Continental M. Corp., Detroit, Mich.
 D—Head & Side
 GBS—Geo. W. Golden, Detroit, Mich.
 H—Overhead.
 HaS—Hall-Scott Motor Car Co., Berkeley, Cal.
 Her—Hercules M. Mfg. Co., Canton, Ohio.
 Himico—Hinkley Motors, Inc., Detroit, Mich.
 Hin—Hinkley Motors, Inc., Detroit, Mich.
 H-S—Herschell-Spillman Motor Co., North Tonawanda, N. Y.
 Jackson—Master Motor Truck Mfg. Co., Chicago, Ill.
 Kni—Yellow Sleeve Valve Eng. Works, East Moline, Ill.
 L—L-Head.
 Lyc—Lycoming M. Corp., Williamsport, Pa.
 Mid—Midwest Eng. Co., Indianapolis, Ind.
 FP—Full Pressure to all bearings including wrist pins.
 Overland—Willys-Overland Co., Toledo, O.
 PC—Pressure to all crankshaft and connecting rod bearings.
 PS—Pressure with splash.
 SP—Circulating splash.
 T—T-Head.
 Wau—Waukesha M. Co., Waukesha, Wis.
 Wis—Wisconsin M. Mfg. Co., Milwaukee, Wis.
 X—Sleeve.

Governor:

- Con—Continental M. Corp., Detroit, Mich.
 Dup—Duplex Eng. Gov. Co., Brooklyn, N. Y.
 Han—Handy Gov. Co., Detroit, Mich.
 Hin—Hinkley Motors, Inc., Detroit, Mich.
 K. P.—K. P. Products Co., New York, N. Y.
 McK—E. R. Klemm, Chicago, Ill.
 Mon—Monarch Gov. Co., Detroit, Mich.
 Non—Not Supplied.
 Pha—Pharo Mfg. Co., Detroit, Mich.
 Pie—Pierce Governor Co., Anderson, Ind.
 Sim—Duplex Eng. Gov. Co., Brooklyn, N. Y.
 Wau—Waukesha M. Co., Waukesha, Wis.

Radiator:

- Bus—Bush Mfg. Co., Hartford, Conn.
 Chi—Chicago Mfg. Co., Chicago, Ill.
 E-M—English & Mersick Co., New Haven, Conn.
 Fed—Fedders Mfg. Co., Buffalo, N. Y.
 Fle—Flexo Mfg. Co., Los Angeles, Cal.
 G-O—G. & O. Mfg. Co., New Haven, Conn.
 Har—Harrison Rad. Corp., Lockport, N. Y.
 Idl—Ideal Sheet Metal Works, Chicago, Ill.
 Liv—Livingston Radiator Corp., Plainfield, N. J.
 Lon—Long Mfg. Co., Detroit, Mich.
 McC—McCord Rad. & Mfg. Co., Detroit, Mich.
 Mod—Modine Mfg. Co., Racine, Wis.
 Per—Racine Radiator Co., Racine, Wis.
 R-T—Rome-Turney Rad. Co., Rome, N. Y.
 Stn—Standard Radiator Co., Inc., Springfield, N. Y.
 U. S.—U. S. Cartridge Co., Lowell, Mass.

Fuel System:

- Car—Carter Carburetor Co., St. Louis, Mo.
 Ens—Ensign Car. Co., Los Angeles, Cal.
 G—Gravity.
 Hol—Holley Carburetor Co., Detroit, Mich.
 Joh—Johnson Co., Detroit, Mich.
 Mar—Marvel Carburetor Co., Flint, Mich.
 P—Pressure.
 Ray—Beneke & Kropf Mfg. Co., Chicago, Ill.
 Sch—Wheeler Schebler Carburetor Co., Indianapolis, Ind.
 Ste—Detroit Lubricator Co., Detroit, Mich.
 Str—Stromberg Motor Devices Co., Chicago, Ill.
 Til—Tillotson Mfg. Co., Toledo, Ohio.
 V—Vacuum.
 Zen—Zenith-Detroit Corp., Detroit, Mich.

Electrical System:

- †—Generator & Starter at Extra Cost.
 †—Starter not Supplied, Generator at Extra Cost.
 *—Starter at Extra Cost.
 A-L—Electric Auto-Lite Corp., Toledo, O.
 Apo—Apollo Magneto Corp., Apollo, Pa.
 Bij—Bijur Motor Appliance Co., Hoboken, N. J.
 Bos—American Bosch Magneto Co., Springfield, Mass.
 Con—Connecticut Telephone & Electric Co., Meriden, Conn.
 Del—Dayton Engin. Lab. Co., Dayton, Ohio.
 Dyn—Owen Dyneto Corp., Syracuse, N. Y.
 Eis—Eisemann Magneto Corp., Brooklyn, G. & D.—Gray & Davis, Boston, Mass.
 L-N—Leece-Neville Co., Cleveland, O.
 N-E—North East Elec. Co., Rochester, N. Y.
 Non—Not Supplied.
 Rem—Remy Electric Co., Anderson, Ind.
 RBO—Robert Bosch Magneto Co., New York, N. Y.
 Sci—Scintilla Magneto Co., New York, N. Y.
 Sim—Simms Magneto Co., E. Orange, N. J.
 Spl—Splittorf Electrical Co., Newark, N. J.
 Ves—Vesta Battery Corp., Chicago, Ill.
 Wes—Westinghouse Elec. & Mfg. Co., Springfield, Mass.

Clutch and Gearset:

- *—Other ratios optional.
 A—Amidships.
 B & B—Borg & Beck Co., Chicago, Ill.
 B-L—Brown-Lipe Gear Co., Syracuse, N. Y.
 Cot—Cotta Transmission Corp., Rockford, Ill.
 Coy—Covert Gear Co., Lockport, N. Y.
 Det—A. J. Detlaff Co., Detroit, Mich.
 D-G—Detroit Gear & Machine Co., Detroit, Mich.
 Dod—Dodge Brothers Co., Detroit, Mich.
 D-Disk.
 Dur—Durstun Gear Corp., Syracuse, N. Y.
 Ful—Fuller & Sons Mfg. Co., Kalamazoo, Mich.
 H-S—Hele-Shaw, Merchant & Evans Co., Philadelphia, Pa.
 Hoo—Hoosier Clutch Co., Muncie, Ind.
 J—Unit with Jackshaft.
 K—Cone.
 Lon—Long Mfg. Co., Detroit, Mich.
 M-E—Merchant & Evans Co., Phila., Pa.
 M. M.—Mechanics Machine Co., Rockford, Ill.
 Mun—Muncie Gear Works, Muncie, Ind.
 O—Disk in Oil.
 P—Plate.
 R—Rear Axle.
 U—Unit with Engine.
 W-G—Warner Gear Co., Muncie, Ind.

Universal:

- B.G.—Universal Machine Co., Bowling Green, Ohio.
 Blo—Blood-Bros. Mach. Co., Allegan, Mich.
 Det—Universal Products Co., Detroit, Mich.
 Har—Hartford Auto Parts Corp., S. Plainfield, N. J.
 M-E—Merchant & Evans Co., Phila., Pa.
 M. M.—Mechanics Machine Co., Rockford, Ill.
 Pet—Cleveland Universal Parts Co., Cleveland, Ohio.
 Pic—Carl Pick Co., West Bend, Wis.
 Snc—Spicer Mfg. Corp., S. Plainfield, N. J.
 Spl—Spicer Mfg. Corp., S. Plainfield, N. J.
 The—Thermoid Rubber Co., Trenton, N. J.
 Thei—Universal Drive Shaft Co., Cleveland, Ohio.
 U-M—Universal Machine Co., Bowling Green, Ohio.
 U-P—Universal Products Co., Detroit, Mich.

Front and Rear Axles:

- ½—Semi-Floating.
 ¾—Three-Quarter Floating.
 Cla—Clark Equip. Co., Buchanan, Mich.
 Col—Columbia Axle Co., Cleveland, O.
 Con—Continental Axle Co., Edgerton, Wis.
 C—Chain.
 B—Straight Bevel.
 D—Dead.
 Eat—Eaton Axle Co., Cleveland, Ohio.
 F—Floating.
 I—Internal Gear.
 P—Spur Gear.
 R—Double Reduction.
 Rus—Russel Motor Axle Co., Detroit, Mich.
 S—Spiral Bevel.
 Sal—Salisbury Axle Co., Jamestown, N. Y.
 She—Sheldon Axle & Spring Co., Wilkes-Barre, Pa.

- Shu—Shuler Axle Co., Inc., Louisville, Ky.
 Std—Standard Parts Co., Cleveland, O.
 Tim—Timken Detroit Axle Co., Detroit, Mich.
 Tor—Eaton Axle & Spring Co., Cleveland, Ohio.
 Vul—Vulcan Motor Axle Co.
 Wal—Walker Axle Co., Chicago, Ill.
 W—Worm.
 Wis—Wisconsin Parts Co., Oshkosh, Wis.

Brake:

- A—Rear Wheels only.
 B—Drive Shaft and Rear Wheels.
 C—Front and Rear Wheel.
 D—Jackshaft and Rear Wheels.
 E—4 Wheel Brakes.

Springs:

- Amc—American Auto Parts Co., Detroit, Mich.
 Arm—General Motors Co., Pontiac, Mich.
 Bea—Beans Spring Co., Inc., Massillon, O.
 Bet—Betts Bros. Sp. Co., Inc., San Francisco, Cal.
 Cha—Champion Auto Sp. Co., St. Louis, Mo.
 Del—D. Delany & Son, Newark, N. J.
 Det—Detroit Steel Prod. Co., Detroit, Mich.
 G-C—Garden City Sp. Works, Chicago, Ill.
 Har—Harvey Sp. & Forging Co., Racine, Wis.
 Lah—Laher Auto Spring Co., Portland, Ore.
 Mar—Maremont Mfg. Co., Chicago, Ill.
 Mat—Mather Spring Co., Toledo, O.
 Mer—E. R. Merrill Spring Co., New York.
 Pen—Penn Sp. Works, Baldwinville, N. Y.
 Per—Perfection Sp. Co., Cleveland, O.
 Row—William & Harvey Rowland, Phila., Pa.
 She—Sheldon Axle & Sp. Co., Wilkes-Barre, Pa.
 S. P.—Spring Perch Co., Stratford, Conn.
 S. S.—Standard Steel Sp. Co., Coraopolis, Pa.
 Tut—Tuthill Sp. Co., Chicago, Ill.
 U. S.—United States Sp. Co., Los Angeles, Cal.

Steering Gear:

- CAS—C. A. S. Products Co., Columbus, O.
 Dod—Dodge Bros. Co., Detroit, Mich.
 Gem—Gemmer Mfg. Co., Detroit, Mich.
 Jac—Saginaw Products Co., Saginaw, Mich.
 Lav—Lavine Gear Co., Milwaukee, Wis.
 Ros—Ross Gear & Tool Co., Lafayette, Ind.
 Woh—Wohlrab Gear Co., Racine, Wis.

Wheels:

- Arc—Archibald Wheel Co., Lawrence, Mass.
 A-W—Auto Wheel Co., Lansing, Mich.
 Bet—Bethlehem Steel Co., Bethlehem, Pa.
 Bim—Bimel Spoke & Auto Wheel Co., Portland, Ind.
 Bud—Budd Wheel Co., Phila., Pa.
 Cla—Clark Equip. Co., Buchanan, Mich.
 Day—Dayton Steel Foundry Co., Dayton, Ohio.
 Dis—Disteel Wheel Corp., Detroit, Mich.
 Hay—Hayes Wheel Co., Jackson, Mich.
 Hoo—Hoopes, Bro. & Darlington, Inc., West Chester, Pa.
 Ind—Indestructible Wheel Co., Lebanon, Ind.
 Int—Interstate Foundry Co., Chicago, Ill.
 Jon—Jones, Phineas & Co., Newark, N. J.
 Kel—Kelsey Wheel Co., Detroit, Mich.
 M-M—Michigan Malleable Iron Co., Detroit.
 Mot—Motor Wheel Corp., Lansing, Mich.
 Mun—Muncie Wheel Co., Muncie, Ind.
 Nor—Northern Wheel Corp., Alma, Mich.
 Pru—Prudden Wheel Co., Lansing, Mich.
 Roy—Royer Wheel Co., Aurora, Ind.
 Sch—Schwarz Wheel Co., Phila., Pa.
 Smi—Smith Wheel, Inc., Syracuse, N. Y.
 StM—St. Marys Wheel Co., St. Marys, O.
 Std—Standard Wheel Co., Terre Haute, Ind.
 Van—Van Wheel Corp., Oneida, N. Y.
 Way—Wayne Wheel Co., Newark, N. Y.

Rim Equipment:

- Fir—Firestone Steel Products Co., Akron, Ohio.
 Gdy—Goodyear Tire & Rubber Co., Akron, Ohio.
 Hay—Hayes Wheel Co., Jackson, Mich.
 Jax—Jaxon Steel Prod. Co., Jackson, Mich.
 Kel—Kelsey Wheel Co., Detroit, Mich.
 Non—None Supplied.

Bonlacament Table—Corrected Monthly

Replacement Table—Corrected Monthly

Including Brake Lining Sizes and Truck Frame Dimensions

NAME, MODEL AND TONNAGE	BRAKE LINING				BRAKE LINING				FRAME				
	Service		Emergency		Service		Emergency		Length		Width		
	Length	Width	Thickness	No. of Pieces	Length	Width	Thickness	No. of Pieces	Back of Driver's Seat to Center of Rear Axle	Driver's Seat to Center of Rear Axle	Over All	Clearance at Lowest Point of Chassis	
Ace 40-1½	12	3½	¼	4	12	3½	¼	4	122½	76½	215½	32	9
Ace 60-3	13½	2½	¼	4	48	2½	¼	2	Opt	84½	241	34	9½
Ace 60-3	23	3	¼	1	54	2½	¼	2	103	96½	189	34	8½
Ace 201-1½	12	3½	¼	4	12	3½	¼	4	140	108	200	34	10½
Ace 601-3	13	3½	¼	4	13	3½	¼	4	148	79	235½	34	10
Ace 901-3	15½	3½	¼	4	15½	3½	¼	4	153	96½	255	37	10½
Ace 125-6½	18	4	¼	4	18	4	¼	4	159½	99½	261	37	10
American-La France W	†	†	¼	4	17	3½	¼	4	132	81	236	33	10
American-La France W	†	†	¼	4	17	3½	¼	4	136	98	260	33	10
American-La France W	†	†	¼	4	17	3½	¼	4	144	107	284	33	10
American-La France V	11½	3½	¼	4	21	4	¼	4	168	103	268	36	9
American-La France V	11½	3½	¼	4	21	4	¼	4	170½	124	281	36	9
American-La France V	11½	3½	¼	4	21	4	¼	4	174½	124	281	36	9
American-La France V	11½	3½	¼	4	21	4	¼	4	192½	113½	292½	36	10
American-La France V	11½	3½	¼	4	21	4	¼	4	210½	125	315½	36	10
Armleder 30-1½	11½	3½	¼	4	11½	3½	¼	4	Opt	77½	228½	32	10
Armleder 50-2½	13	3½	¼	4	13	3½	¼	4	119½	76	211½	34	9½
Atterbury 24-R	11½	3½	¼	4	13	3½	¼	4	129½	78½	225	34	9½
Atterbury 22C-2½	15½	3½	¼	4	15½	3½	¼	4	142½	93½	242	37½	10½
Atterbury 24E	17½	4	¼	4	17½	4	¼	4	159½	89½	263	37½	10½
Autocar XXI-F-1½	16½	2½	¼	4	13½	2½	¼	4	91	67	156	34	9½
Autocar XXI-F-1½	16½	2½	¼	4	13½	2½	¼	4	114	90	179	34	9½
Autocar XXVI-M4-6	23½	2½	¼	4	23½	2½	¼	4	139½	80½	223½	34½	10
Autocar XXVI-L4-6	23½	2½	¼	4	23½	2½	¼	4	175½	116½	258½	34½	10
Autocar XXVII-H3	20½	2	¼	4	20½	2	¼	4	155½	100	237½	34½	10½
Autocar XXVII-K3	20½	2	¼	4	20½	2	¼	4	155½	100	237½	34½	10½
Available J-H-1½	48	2½	¼	4	36	2½	¼	4	120	80½	201½	32	9
Available J-H-2½	48	2½	¼	4	36	2½	¼	4	120	84½	212	32	9
Available J-H-2½	13½	3½	¼	4	13½	3½	¼	4	144	85½	225½	32	9
Available J-H-3½	16	3½	¼	4	16	3½	¼	4	168	108½	254½	36	9
Available J-H-5	18	4	¼	4	18	4	¼	4	168	112½	263½	38	0
Bessener G-1	46	2½	¼	4	44	2½	¼	4	98½	58½	182½	34	9
Bessener H-2-1½	16½	2½	¼	4	16½	2½	¼	4	116	76	205	34	9
Bessener H-2-2½	19	3½	¼	4	19	3½	¼	4	126	92½	215	34	10
Bessener H-2-3½	19	3½	¼	4	19	3½	¼	4	Opt	72	204	32	10
Biederman 40-1½	12	3½	¼	4	12	3½	¼	4	120	84	228	32	10
Biederman 40-1½	12	3½	¼	4	12	3½	¼	4	148	96	252	32	10
Biederman 60-3½	13	3½	¼	4	13	3½	¼	4	168	108	276	32	10
Biederman 80-3½	15½	3½	¼	4	15½	3½	¼	4	192	120	300	32	10
Brinton C-1½	39	2½	¼	1	38	2½	¼	1	118	...	...	...	33
Brockway S-12-1½	13	3½	¼	4	13	3½	¼	4	118	...	...	...	33
Brockway K-11-2½	10	3½	¼	4	10	3½	¼	4	118	...	...	...	33
Brockway R-12-3½	13	3½	¼	4	13	3½	¼	4	142	89½	123½	34	...
Brockway T-6-5	17½	4	¼	4	15½	4	¼	4	176	102½	175	36	...
Buck J-24	11½	2½	¼	4	11½	2½	¼	4	64	104½	176	36	...
Buck 50	13½	3½	¼	4	13½	3½	¼	4	119	...	...	...	10½
Buck K-45	12	3½	¼	4	12	3½	¼	4	122	60	222	33	9
Buck 80	13½	3½	¼	4	13½	3½	¼	4	122	60	222	33	9
Buck L-75	13½	3½	¼	4	13½	3½	¼	4	131	80	234	33½	9
Buck 100	16	3½	¼	4	16	3½	¼	4	131	87	234	38	10
Buck L-110	16	3½	¼	4	16	3½	¼	4	131	87	234	38	10
Buck 130	16	3½	¼	4	16	3½	¼	4	126	92	234	38	10
Buck B-120	16	3½	¼	4	16	3½	¼	4	126	92	234	38	10
Casco A-1	48½	2½	¼	1	48	2½	¼	1	104	61	192½	34	10
Chevrolet Sup. Com. Chassis	...	...	...	...	...	...	...	...	Opt	170	191	34	9½
Chevrolet Utility Exp.	54½	2½	¼	2	54½	2½	¼	2	Opt	194	216	37	9½
Chicago 10	11½	3½	¼	4	11½	3½	¼	4	103	79½	176	34	10
Chicago 15	13½	3½	¼	4	13½	3½	¼	4	117	92½	236	34	10½
Chicago 25	18	4	¼	4	18	4	¼	4	117	92½	236	34	10½
Chicago 35	18	4	¼	4	18	4	¼	4	194½	288	355½	35½	10½
Chicago 50B-1½	26½	1½	¼	2	20½	1½	¼	2	208½	110½	302	34	10
Clinton 40-2	11½	3½	¼	4	11½	3½	¼	4	112	73½	207	34	10
Clinton 60-3	13½	2½	¼	4	13½	2½	¼	4	131	83½	233	33½	9½
Clinton 90-90M-4	15½	3½	¼	4	15½	3½	¼	4	166	102	270½	33½	9½
Clinton 120L-120LM-5	18	4	¼	4	18	4	¼	4	163	105	270½	38	8½
Clinton 120S-120SM-5-7	18	4	¼	4	18	4	¼	4	208½	115	318	38	8
Clydesdale 120B-5-5-6	18	4	¼	4	18	4	¼	4	131	104	208½	91	242
Clydesdale 90-3½-4½	16	3½	¼	4	16	3½	¼	4	143	...	...	...	...
Clydesdale 65EX-2½-3	13½	3½	¼	4	13½	3½	¼	4	132	...	...	...	...
Clydesdale 65X-2½-3	13½	3½	¼	4	13½	3½	¼	4	137	...	...	...	...
Clydesdale 42-1½-2	12	3	¼	4	12	3	¼	4	117	...	...	...	...
Clydesdale 20-1-1½	11½	3	¼	4	11½	3	¼	4	95	...	...	...	...
Clydesdale 18-¾-1½	11½	2½	¼	4	11½	2½	¼	4	95	...	...	...	...
Clydesdale 10A-1-¾-1½	11½	2½	¼	4	11½	2½	¼	4	109	...	...	...	...
Clydesdale 10A-1-¾-1½	11½	2½	¼	4	11½	2½	¼	4	109	...	...	...	...
Commerce 11B-2000	50	2	¼	2	48½	2	¼	2	92½	53½	193	34	9
Commerce 14B-3000	11½	3½	¼	4	11½	3½	¼	4	117	75	210	34	8½
Commerce 23B-5000	13	3	¼	4	12	3	¼	4	132	84	228½	34	12½
Concord E-1	12	3	¼	4	12	3	¼	4	108	63	200	33½	10½
Concord G-2	13½	3½	¼	4	13½	3½	¼	4	119	74	217	33½	10½
Concord H-2	12	3½	¼	4	12	3½	¼	4	121	74	217	33½	10½
Concord J-2½	13½	3½	¼	4	13½	3½	¼	4	153	92	254	35	10½
Corbitt S-¾	18½	1½	¼	4	18½	1½	¼	4	103	59	196	34	11½
Corbitt D-1½	16½	1½	¼	4	16½	1½	¼	4	104	62	198	34	11½
Corbitt C-2	25	2	¼	4	23	2	¼	4	110	72	206	34	10½
Corbitt B-2½	25	2	¼	4	23	2	¼	4	132	78	230	35	10½
Corbitt R-2½-3	21	3	¼	4	21	3	¼	4	136	78	232	35	10½
Corbitt A-3½-4	21	3	¼	4	21	3	¼	4	153	92	254	35	10½
Corbitt AA-5	68½	2	¼	2	68½	2	¼	2	168	106	266	35	9
Day-Elder G-1½	11½	3½	¼	4	11½	3½	¼	4	105½	61½	191	35	10½
Day-Elder H-2½	13½	3½	¼	4	13½	3½	¼	4	123½	77½	218	34	9½
Day-Elder J-3	13½	3½	¼	4	13½	3½	¼	4	115½	77½	218	35	10½
Day-Elder K-4	15½	3½	¼	4	15½	3½	¼	4	121	86	220	37	10½
Day-Elder L-5	17½	4	¼	4	17½	4	¼	4	148	88	253	37	10½
Diamond T-75-M-1	22	2½	¼	4	22	2½	¼	4	171	57½	182½	34	...
Diamond T-O4-1-1½	48	2½	¼	2	33	2½	¼	2	100	...	...	...	...
Diamond T-T-1½	13½	3½	¼	4	13½	3½	¼	4	Opt	...	...	...	...
Diamond T-U2-2½	15½	3½	¼	4	15½	3½	¼	4	Opt	...	...	...	...
Diamond TK-3½	18	4	¼	4	18	4	¼	4	Opt	...	...	...	...
Diamond T-S-5	18	4	¼	4	18	4	¼	4	Opt	...	...	...	...
Dixon Model D	13	3½	¼	4	13	3½	¼	4	126	71	221½	33½	9½
Dixon Model C	13	3½	¼	4	13	3½	¼	4	Opt	...	...	...	...
Dixon Model A	13½	3½	¼	4	13½	3½	¼	4	Opt	...	...	...	...
Dorris K-4-2½	16	3½	¼	4	16	3½	¼	4	126	91½	233½	36	9½
Dorris K-7-3½	16	3½	¼	4	16	3½	¼	4	126	91½	233½	36	9½
Double Drive T-T-3	16	3½	¼	4	16	3½	¼	4	132	100	216	34	9½

†—12" O. D. 71½" I. D.

Replacement Table—Continued

NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
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	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness	Length	Thickness				
NAME, MODEL AND TONNAGE	BRAKE LINING				FRAME			
	Service		Emergency		Length	Width	Clearance at Lowest Point	
	Length	Thickness						

Replacement Table—Continued

NAME, MODEL AND TONNAGE	BRAKE LINING					FRAME					BRAKE LINING					FRAME				
	Service			Emergency		Length	Over All	Clearance at Lowest Point of Chassis	Service			Emergency		Length	Over All	Clearance at Lowest Point of Chassis				
	Length	Width	No. of Pieces	Thickness	Width				No. of Pieces	Thickness	Width	No. of Pieces	Thickness							
NAME, MODEL AND TONNAGE	Length	Width	No. of Pieces	Thickness	Length	Over All	Over All	Clearance at Lowest Point of Chassis	Length	Width	No. of Pieces	Thickness	Length	Over All	Over All	Clearance at Lowest Point of Chassis				
Maack AC-3½, 5.6½, 7½, 10, 13, 15, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000, 1002, 1004, 1006, 1008, 1010, 1012, 1014, 1016, 1018, 1020, 1022, 1024, 1026, 1028, 1030, 1032, 1034, 1036, 1038, 1040, 1042, 1044, 1046, 1048, 1050, 1052, 1054, 1056, 1058, 1060, 1062, 1064, 1066, 1068, 1070, 1072, 1074, 1076, 1078, 1080, 1082, 1084, 1086, 1088, 1090, 1092, 1094, 1096, 1098, 1100, 1102, 1104, 1106, 1108, 1110, 1112, 1114, 1116, 1118, 1120, 1122, 1124, 1126, 1128, 1130, 1132, 1134, 1136, 1138, 1140, 1142, 1144, 1146, 1148, 1150, 1152, 1154, 1156, 1158, 1160, 1162, 1164, 1166, 1168, 1170, 1172, 1174, 1176, 1178, 1180, 1182, 1184, 1186, 1188, 1190, 1192, 1194, 1196, 1198, 1200, 1202, 1204, 1206, 1208, 1210, 1212, 1214, 1216, 1218, 1220, 1222, 1224, 1226, 1228, 1230, 1232, 1234, 1236, 1238, 1240, 1242, 1244, 1246, 1248, 1250, 1252, 1254, 1256, 1258, 1260, 1262, 1264, 1266, 1268, 1270, 1272, 1274, 1276, 1278, 1280, 1282, 1284, 1286, 1288, 1290, 1292, 1294, 1296, 1298, 1300, 1302, 1304, 1306, 1308, 1310, 1312, 1314, 1316, 1318, 1320, 1322, 1324, 1326, 1328, 1330, 1332, 1334, 1336, 1338, 1340, 1342, 1344, 1346, 1348, 1350, 1352, 1354, 1356, 1358, 1360, 1362, 1364, 1366, 1368, 1370, 1372, 1374, 1376, 1378, 1380, 1382, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1404, 1406, 1408, 1410, 1412, 1414, 1416, 1418, 1420, 1422, 1424, 1426, 1428, 1430, 1432, 1434, 1436, 1438, 1440, 1442, 1444, 1446, 1448, 1450, 1452, 1454, 1456, 1458, 1460, 1462, 1464, 1466, 1468, 1470, 1472, 1474, 1476, 1478, 1480, 1482, 1484, 1486, 1488, 1490, 1492, 1494, 1496, 1498, 1500, 1502, 1504, 1506, 1508, 1510, 1512, 1514, 1516, 1518, 1520, 1522, 1524, 1526, 1528, 1530, 1532, 1534, 1536, 1538, 1540, 1542, 1544, 1546, 1548, 1550, 1552, 1554, 1556, 1558, 1560, 1562, 1564, 1566, 1568, 1570, 1572, 1574, 1576, 1578, 1580, 1582, 1584, 1586, 1588, 1590, 1592, 1594, 1596, 1598, 1600, 1602, 1604, 1606, 1608, 1610, 1612, 1614, 1616, 1618, 1620, 1622, 1624, 1626, 1628, 1630, 1632, 1634, 1636, 1638, 1640, 1642, 1644, 1646, 1648, 1650, 1652, 1654, 1656, 1658, 1660, 1662, 1664, 1666, 1668, 1670, 1672, 1674, 1676, 1678, 1680, 1682, 1684, 1686, 1688, 1690, 1692, 1694, 1696, 1698, 1700, 1702, 1704, 1706, 1708, 1710, 1712, 1714, 1716, 1718, 1720, 1722, 1724, 1726, 1728, 1730, 1732, 1734, 1736, 1738, 1740, 1742, 1744, 1746, 1748, 1750, 1752, 1754, 1756, 1758, 1760, 1762, 1764, 1766, 1768, 1770, 1772, 1774, 1776, 1778, 1780, 1782, 1784, 1786, 1788, 1790, 1792, 1794, 1796, 1798, 1800, 1802, 1804, 1806, 1808, 1810, 1812, 1814, 1816, 1818, 1820, 1822, 1824, 1826, 1828, 1830, 1832, 1834, 1836, 1838, 1840, 1842, 1844, 1846, 1848, 1850, 1852, 1854, 1856, 1858, 1860, 1862, 1864, 1866, 1868, 1870, 1872, 1874, 1876, 1878, 1880, 1882, 1884, 1886, 1888, 1890, 1892, 1894, 1896, 1898, 1900, 1902, 1904, 1906, 1908, 1910, 1912, 1914, 1916, 1918, 1920, 1922, 1924, 1926, 1928, 1930, 1932, 1934, 1936, 1938, 1940, 1942, 1944, 1946, 1948, 1950, 1952, 1954, 1956, 1958, 1960, 1962, 1964, 1966, 1968, 1970, 1972, 1974, 1976, 1978, 1980, 1982, 1984, 1986, 1988, 1990, 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2020, 2022, 2024, 2026, 2028, 2030, 2032, 2034, 2036, 2038, 2040, 2042, 2044, 2046, 2048, 2050, 2052, 2054, 2056, 2058, 2060, 2062, 2064, 2066, 2068, 2070, 2072, 2074, 2076, 2078, 2080, 2082, 2084, 2086, 2088, 2090, 2092, 2094, 2096, 2098, 2100, 2102, 2104, 2106, 2108, 2110, 2112, 2114, 2116, 2118, 2120, 2122, 2124, 2126, 2128, 2130, 2132, 2134, 2136, 2138, 2140, 2142, 2144, 2146, 2148, 2150, 2152, 2154, 2156, 2158, 2160, 2162, 2164, 2166, 2168, 2170, 2172, 2174, 2176, 2178, 2180, 2182, 2184, 2186, 2188, 2190, 2192, 2194, 2196, 2198, 2200, 2202, 2204, 2206, 2208, 2210, 2212, 2214, 2216, 2218, 2220, 2222, 2224, 2226, 2228, 2230, 2232, 2234, 2236, 2238, 2240, 2242, 2244, 2246, 2248, 2250, 2252, 2254, 2256, 2258, 2260, 2262, 2264, 2266, 2268, 2270, 2272, 2274, 2276, 2278, 2280, 2282, 2284, 2286, 2288, 2290, 2292, 2294, 2296, 2298, 2300, 2302, 2304, 2306, 2308, 2310, 2312, 2314, 2316, 2318, 2320, 2322, 2324, 2326, 2328, 2330, 2332, 2334, 2336, 2338, 2340, 2342, 2344, 2346, 2348, 2350, 2352, 2354, 2356, 2358, 2360, 2362, 2364, 2366, 2368, 2370, 2372, 2374, 2376, 2378, 2380, 2382, 2384, 2386, 2388, 2390, 2392, 2394, 2396, 2398, 2400, 2402, 2404, 2406, 2408, 2410, 2412, 2414, 2416, 2418, 2420, 2422, 2424, 2426, 2428, 2430, 2432, 2434, 2436, 2438, 2440, 2442, 2444, 2446, 2448, 2450, 2452, 2454, 2456, 2458, 2460, 2462, 2464, 2466, 2468, 2470, 2472, 2474, 2476, 2478, 2480, 2482, 2484, 2486, 2488, 2490, 2492, 2494, 2496, 2498, 2500, 2502, 2504, 2506, 2508, 2510, 2512, 2514, 2516, 2518, 2520, 2522, 2524, 2526, 2528, 2530, 2532, 2534, 2536, 2538, 2540, 2542, 2544, 2546, 2548, 2550, 2552, 2554, 2556, 2558, 2560, 2562, 2564, 2566, 2568, 2570, 2572, 2574, 2576, 2578, 2580, 2582, 2584, 2586, 2588, 2590, 2592, 2594, 2596, 2598, 2600, 2602, 2604, 2606, 2608, 2610, 2612, 2614, 2616, 2618, 2620, 2622, 2624, 2626, 2628, 2630, 2632, 2634, 2636, 2638, 2640, 2642, 2644, 2646, 2648, 2650, 2652, 2654, 2656, 2658, 2660, 2662, 2664, 2666, 2668, 2670, 2672, 2674, 2676, 2678, 2680, 2682, 2684, 2686, 2688, 2690, 2692, 2694, 2696, 2698, 2700, 2702, 2704, 2706, 2708, 2710, 2712, 2714, 2716, 2718, 2720, 2722, 2724, 2726, 2728, 2730, 2732, 2734, 2736, 2738, 2740, 2742, 2744, 2746, 2748, 2750, 2752, 2754, 2756, 2758, 2760, 2762, 2764, 2766, 2768, 2770, 2772, 2774, 2776, 2778, 2780, 2782, 2784, 2786, 2788, 2790, 2792, 2794, 2796, 2798, 2800, 2802, 2804, 2806, 2808, 2810, 2812, 2814, 2816, 2818, 2820, 2822, 2824, 2826, 2828, 2830, 2832, 2834, 2836, 2838, 2840, 2842, 2844, 2846, 2848, 2850, 2852, 2854, 2856, 2858, 2860, 2862, 2864, 2866, 2868, 2870, 2872, 2874, 2876, 2878, 2880, 2882, 2884, 2886, 2888, 2890, 2892, 2894, 2896, 2898, 2900, 2902, 2904, 2906, 2908, 2910, 2912, 2914, 2916, 2918, 2920, 2922, 2924, 2926, 2928, 2930, 2932, 2934, 2936, 2938, 2940, 2942, 2944, 2946, 2948, 2950, 2952, 2954, 2956, 2958, 2960, 2962, 2964, 2966, 2968, 2970, 2972, 2974, 2976, 2978, 2980, 2982, 2984, 2986, 2988, 2990, 2992, 2994, 2996, 2998, 3000, 3002, 3004, 3006, 3008, 3010, 3012, 3014, 3016, 3018, 3020, 3022, 3024, 3026, 3028, 3030, 3032, 3034, 3036, 3038, 3040, 3042, 3044, 3046, 3048, 3050, 3052, 3054, 3056, 3058, 3060, 3062, 3064, 3066, 3068, 3070, 3072, 3074, 3076, 3078, 3080, 3082, 3084, 3086, 3088, 3090, 3092, 3094, 3096, 3098, 3100, 3102, 3104, 3106, 3108, 3110, 3112, 3114, 3116, 3118, 3120, 3122, 3124, 3126, 3128, 3130, 3132, 3134, 3136, 3138, 3140, 3142, 3144, 3146, 3148, 3150, 3152, 3154, 3156, 3158, 3160, 3162, 3164, 3166, 3168, 3170, 3172, 3174, 3176, 3178, 3180, 3182, 3184, 3186, 3188, 3190, 3192, 3194, 3196, 3198, 3200, 3202, 3204, 3206, 3208, 3210, 3212, 3214, 3216, 3218, 3220, 3222, 3224, 3226, 3228, 3230, 3232, 3234, 3236, 3238, 3240, 3242, 3244, 3246, 3248, 3250, 3252, 3254, 3256, 3258, 3260, 3262, 3264, 3266, 3268, 3270, 3272, 3274, 3276, 3278, 3280, 3282, 3284, 3286, 3288, 3290, 3292, 3294, 3296, 3298, 3300, 3302, 3304, 3306, 3308, 3310, 3312, 3314, 3316, 3318, 3320, 3322, 3324, 3326, 3328, 3330, 3332, 3334, 3336, 3338, 3340, 3342, 3344, 3346, 3348, 3350, 3352, 3354, 3356, 3358, 3360, 3362, 3364, 3366, 3368, 3370, 3372, 3374, 3376, 3378, 3380, 3382, 3384, 3386, 3388, 3390, 3392, 3394, 3396, 3398, 3400, 3402, 3404, 3406, 3408, 3410, 3412, 3414, 3416, 3418, 3420, 3422, 3424, 3426, 3428, 3430, 3432, 3434, 3436, 3438, 3440, 3442, 3444, 3446, 3448, 3450, 3452, 3454, 3456, 3458, 3460, 3462, 3464, 3466, 3468, 3470, 3472, 3474, 3476, 3478, 3480, 3482, 3484, 3486, 3488, 3490, 3492, 3494, 3496, 3498, 3500, 3502, 3504, 3506, 3508, 3510, 3512, 3514, 3516, 3518, 3520, 3522, 3524, 3526, 3528, 3530, 3532, 3534, 3536, 3538, 3540, 3542, 3544, 3546, 3548, 3550, 3552, 3554, 3556, 3558, 3560, 3562, 3564, 3566, 3568, 3570, 3572, 3574, 3576, 3578, 3580, 3582, 3584, 3586, 3588, 3590, 3592, 3594, 3596, 3598, 3600, 3602, 3604, 3606, 3608, 3610, 3612, 3614, 3616, 3618, 3620, 3622, 3624, 3626, 3628, 3630, 3632, 3634, 3636, 3638, 3640, 3642, 3644, 3646, 3648, 3650, 3652, 3654, 3656, 3658, 3660, 3662, 3664, 3666, 3668, 3670, 3672, 3674, 3676, 3678, 3680, 3682, 3684, 3686, 3688, 3690, 3692, 3694, 3696, 3698, 3700, 3702, 3704, 3706, 3708, 3710, 3712, 3714, 3716, 3718, 3720, 3722, 3724, 3726, 3728, 3730, 3732, 3734, 3736, 3738, 3740, 3742, 3744, 3746, 3748, 3750, 3752, 3754, 3756, 3758, 3760, 3762, 3764, 3766, 3768, 3770, 3772, 3774, 3776, 3778, 3780, 3782, 3784, 3786, 3788, 3790, 3792, 3794, 3796, 3798, 3800, 3802, 3804, 3806, 3808, 3810, 3812, 3814, 3816, 3818, 3820, 3822, 3824, 3826, 3828, 3830, 3832, 3834, 3836, 3838, 3840, 3842, 3844, 3846, 3848, 3850, 3852, 3854, 3856, 3858, 3860, 3862, 3864, 3866, 3868, 3870, 3872, 3874, 3876, 3878, 3880, 3882, 3884, 3886, 3888, 3890, 3892, 3894, 3896, 3898, 3900, 3902, 3904, 3906, 3908, 3910, 3912, 3914, 3916, 3918, 3920, 3922, 3924, 3926, 3928, 3930, 3932, 3934, 3936, 3938, 3940, 3942, 3944, 3946, 3948, 3950, 3952, 3954, 3956, 3958, 3960, 3962, 3964, 3966, 3968, 3970, 3972, 3974, 3976, 3978, 3980, 3982, 3984, 3986, 3988, 3990, 3992, 3994, 3996, 3998, 4000, 4002, 4004, 4006, 4008, 4010, 4012, 4014, 4016, 4018, 4020, 4022, 4024, 4026, 4028, 4030, 4032, 4034, 4036, 4038, 4040, 4042, 4044, 4046, 4048, 4050, 4052, 4054, 4056, 4058, 4060, 4062, 4064, 4066, 4068, 4070, 4072, 4074, 4076, 4078, 4080, 4082, 4084, 4086, 4088, 4090, 4092, 4094, 4096, 4098, 4100, 4102, 4104, 4106, 4108, 4110, 4112, 4114, 4116, 4118, 4120, 4122, 4124, 4126, 4128, 4130, 4132, 4134, 4136, 4138, 4140, 4142, 4144, 4146, 4148, 4150, 4152, 4154, 4156, 4158, 4160, 4162, 4164, 4166, 4168, 4170, 4172, 4174, 4176, 4178, 4180, 4182, 4																				

Electric Commercial Cars

Name and Model Number	Total Weight Resting on Four Tires	Chassis Weight—Exclusive of Battery	Minimum Load Capacity	Maximum Load Capacity	Chassis Price	Maximum Speed	Location of Battery	Mileage Per Charge	Motor	Controller	Speeds Forward	Drive	Rear Axle	Springs	Front Tires	Rear Tires	Steering Gear	Wheelbase	Per Cent of Weight on Rear Wheels
Autocar E 1F.....	10000	3650	.....	.....	2400	.....	A	.....	G-E-E	G-E-E	5	R	Own	Row	34x4	34x5	Ross	107	60
Autocar E 2D.....	15000	4300	.....	.....	2800	.....	A	.....	G-E-E	G-E-E	5	R	Own	Row	34x5	34x6	Ross	120	60
Autocar E 3H.....	18000	4900	.....	.....	3200	.....	A	.....	G-E-E	G-E-E	5	R	Own	Row	34x5	36x8	Ross	131	60
Autocar E 4Y.....	26000	6800	.....	.....	4000	.....	A	.....	G-E-E	G-E-E	5	R	Own	Row	34x6	36x8	Ross	138	60
Autocar E 5M.....	30000	7200	.....	.....	4300	.....	A	.....	G-E-E	G-E-E	5	R	Own	Row	36x7	36x8	Ross	138	60
C-T H-1.....	5600	2400	.....	.....	.....	14	A	55	G-E-E	Own	4	Own	F	Shel	36x3	36x3½	W	108	67
C-T F-1.5.....	6600	2800	.....	.....	.....	14	A	60	G-E-E	Own	4	Own	F	Shel	36x3	36x4	W	94	67
C-T H-1.5.....	6600	2800	.....	.....	.....	14	A	60	G-E-E	Own	4	Own	F	Shel	36x3	36x4	W	116	67
C-T F-2.....	8000	3100	.....	.....	.....	14	A	50	G-E-E	Own	4	Own	F	Shel	36x3½	36x5	W	96	67
C-T H-2.....	8000	3100	.....	.....	.....	14	A	50	G-E-E	Own	4	Own	F	Shel	36x3½	36x5	W	124	67
C-T F-4.....	11950	4200	.....	.....	.....	12	A	50	G-E-E	Own	4	Own	F	Shel	36x4	36x4½	W	116	67
C-T A-7.....	17700	5800	.....	.....	.....	11	A	45	G-E-E	Own	4	Own	F	Shel	36x6	36x4½	W	122	58
C-T F-7.....	17700	6000	.....	.....	.....	11	A	45	G-E-E	Own	4	Own	F	Shel	36x5	36x5½	W	132	58
C-T A-10.....	22250	8500	.....	.....	.....	10	A	45	G-E-E	Own	4	Own	F	Shel	36x7	36x5½	W	132	58
C-T F-10.....	22750	7000	.....	.....	.....	10	A	45	G-E-E	Own	4	Own	F	Shel	36x6	36x6½	W	152	67
Kelland AT.....	1950	1000	1500	.....	.....	15	S	50	G-E-E	G-E-E	4	R	Flot	Mer	34x3	34x3	Ross	102	60
Kelland BT.....	2050	1500	2000	.....	.....	15	S	50	G-E-E	G-E-E	4	R	Flot	Mer	34x3½	34x3½	Ross	102	60
Kelland CT.....	2150	2000	2500	.....	.....	15	S	50	G-E-E	G-E-E	4	R	Flot	Mer	34x3½	34x4	Ross	102	60
Kelland AH.....	2500	1000	1500	.....	.....	15	A	45	G-E-E	G-E-E	4	C	D	Mer	36x3	36x3	Hin	106	60
Kelland BH.....	2600	1500	2000	.....	.....	15	A	45	G-E-E	G-E-E	4	C	D	Mer	36x3½	36x3½	Hin	106	60
Kelland CH.....	2700	2000	2500	.....	.....	15	A	45	G-E-E	G-E-E	4	C	D	Mer	36x3½	36x4	Hin	106	60
Kelland ATS.....	2200	1000	1500	.....	.....	15	H&S	50	G-E-E	G-E-E	4	R	Flot	Mer	34x3	34x3	Ross	102	60
Kelland BTS.....	2300	1500	2000	.....	.....	15	H&S	50	G-E-E	G-E-E	4	R	Flot	Mer	34x3½	34x3½	Ross	102	60
Kelland CTS.....	2400	2000	2500	.....	.....	15	H&S	50	G-E-E	G-E-E	4	R	Flot	Mer	34x3½	34x4	Ross	102	60
Lansden Century.....	1700	1250	1600	1500	.....	15	S	60	G-E-E	Own	4	R	Flot	SP	32x4½	32x4½	Ross	108	50
Lansden Century.....	1950	2000	1850	1500	.....	15	S	60	G-E-E	Own	4	R	Flot	SP	33x5	33x5	Ross	112	50
Lansden Marathon.....	2900	2000	1850	1400	.....	14	A	50	G-E-E	Own	4	C	D	SP	36x3½	36x4	Bay	108	60
Lansden Marathon.....	4400	4000	2250	1300	.....	13	A	50	G-E-E	Own	4	C	D	SP	36x4	36x3½	Bay	120	60
Lansden Marathon.....	5700	7000	2950	1100	.....	11	A	45	G-E-E	Own	4	C	D	SP	36x5	36x5½	Bay	133	60
Lansden Marathon.....	7500	10000	3350	1000	.....	10	A	40	G-E-E	Own	4	C	D	SP	36x6	36x6½	Bay	146	60
O. B-B.....	.....	.....	.....	.....	.....	13	.....	.....	G-E-E	Own	.....	C	D	.....	36x4	36x3½	Own	107	.....
O. B-C.....	.....	.....	.....	.....	.....	11	.....	.....	G-E-E	Own	.....	C	D	.....	36x5	36x4	Own	135	.....
O. B-D.....	.....	.....	.....	.....	.....	10	.....	.....	G-E-E	Own	.....	C	D	.....	36x6	36x5	Own	143	.....
Steinmetz 15.....	6800	2200	1000	2250	1800	18	H&S	60	Own	Own	4	R	Own	Lig	32x4½	32x4½	Lav	114	55
Walker 12.....	1900	1900	1000	1000	.....	15	H&S	60	G-E-E	Own	4	.....	Tim	Det	32x3	32x3½	Ross	104	66
Walker 15.....	2800	1500	1500	1500	.....	14	A	50	West	West	5	Own	Own	Math	34x3	36x3½	Ross	94	66
Walker 22.....	3000	2000	2000	2000	.....	13	A	50	West	West	5	Own	Own	Math	34x3½	36x4	Ross	101	66
Walker 42.....	4200	4000	4000	4000	.....	13	A	50	West	West	5	Own	Own	Math	36x4	36x6	Ross	114	66
Walker P.....	6000	7000	7000	7000	.....	11	A	40	West	West	5	Own	Own	Math	36x5	38x5½	Ross	131	66
Walker N.....	6700	10000	10000	10000	.....	10	A	40	West	West	5	Own	Own	Math	36x6	38x6½	Ross	141	66
Walter HD.....	6800	2300	2000	2200	1600	16	A	60	Diehl	G-E-E	5	B	.....	.....	32x3½	32x4	Ross	98	60
Walter EN.....	13200	4400	5000	3100	1500	15	A	50	G-E-E	G-E-E	5	Own	D	.....	36x4	36x7	Gem	114	60
Walter EL.....	16800	5000	7000	3700	13½	13	A	50	G-E-E	G-E-E	5	Own	D	.....	36x5	36x4	Gem	132	60
Walter ES.....	23600	7200	11000	4500	12	12	A	50	G-E-E	G-E-E	5	Own	D	.....	36x6	40x6	Ross	150	70
Walter ER.....	28400	7500	15000	4800	11	11	A	50	G-E-E	G-E-E	5	Own	D	.....	36x7	40x7	Ross	150	70
Ward A211.....	4650	1800	600	1150	.....	15	S	75	G-E-E	Own	4	W	Shel	Shel	32x3	32x3½	Own	88	56
Ward B222.....	6000	2300	1020	1700	.....	14	S	84	G-E-E	Own	4	W	Shel	Shel	32x3½	32x4	Own	91	62
Ward C211.....	8000	2670	2170	2880	.....	13	S	65	G-E-E	Own	4	W	Shel	Shel	32x3½	34x5	Own	96	64
Ward E211.....	12000	3570	4290	5430	.....	12½	S	56½	G-E-E	Own	4	W	Shel	Shel	34x4	36x6	Own	108	65
Ward G211.....	16000	4500	6180	7760	.....	11	S	44	G-E-E	Own	5	W	Shel	Shel	36x5	36x8	Own	120	68
Ward J211.....	22500	6630	9500	11200	.....	10	S	39½	G-E-E	Own	5	W	Shel	Shel	36x6	36x10	Own	136	70
Ward M211.....	30000	8430	13780	15920	.....	9	S	36	G-E-E	Own	5	W	Shel	Shel	36x7	36x7½	Own	152	71

NOTE: Battery Equipment on all above makes is at the option of the purchaser. Battery Location Abbreviations: A-amidships; H-under hood; and S-under seat

Statement of Ownership, Management, Circulation, Etc.

Required by Act of Congress of August 24, 1912

OF COMMERCIAL CAR JOURNAL
published monthly at Philadelphia, Pa.,
for October 1st, 1925

State of Pennsylvania,
County of Philadelphia, ss:

Before me a Notary Public in and for the state and county aforesaid, personally appeared A. W. Brownell, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the COMMERCIAL CAR JOURNAL, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication, for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations printed on the reverse of this form to wit:

- That the names and addresses of the publisher, editor, managing editor and business manager are:
Publisher, CHILTON CLASS JOURNAL Company, Chestnut and 56th Sts., Philadelphia, Pa.
Editor, Albert G. Metz, South Ardmore, Pa.
Managing Editor, Julian Chase, Tarrytown, N. Y.
Business Manager, A. W. Brownell, Merion, Pa.

- That the owners are:
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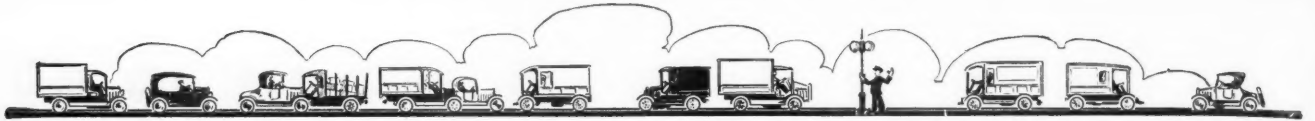
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- That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent of more of total amount of bonds, mortgages, or other securities are: None.
- That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholders or security holder appear upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders, who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and that this affiant has no reason to believe that any other person, association or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

A. W. BROWNELL,
Business Manager.

Sworn and subscribed before me this 28th day of September, 1925.
(Seal) Arthur L. Homer,
(My commission expires March 6th, 1927).



No more running delivery on a "Hunch"

Today, more than ever before, executives are turning to delivery costs—a subject that has been kicked around altogether too long.

Now sensible reasoning and sound figuring are taking the place of "hunches."

Because there's a thrill in stepping on the gas in a passenger car is no sign that delivery trucks must necessarily run by gas.

Because a horse looks economical is no reason for jumping to the conclusion that he's the right thing for frequent-stop city routes.

This delivery business is a science—something to be figured without "hunches," prejudices, pre-conceived ideas, but on the contrary, on straight facts.

And mind you, we don't tell a man what to buy now.

But we do ask him this—to figure his delivery costs. If these costs don't point instantly to the use of Ward Electrics on frequent-stop, short-haul routes, then we have nothing to say.

Incidentally, we might say we have carried delivery cost accounting to as high a point as anybody in the country and have tables and systems that will help them figure costs.

The Willow Brook started with two Ward Electrics. Now they have 17. Our salesmanship may have helped sell the first two, but their own big saving dictated the purchase of the other fifteen.

Our salesmen's biggest profit is in repeat sales.

Ward Motor Vehicle Company
Mt. Vernon, N. Y.

	also	
BOSTON	PHILADELPHIA	NEW YORK
BALTIMORE	CHICAGO	SAN FRANCISCO



Note the low-hung body. Easier, quicker deliveries. Less time for stops, more customers served, longer routes handled.



EDITORIALS



Good Roads Sell Trucks

BETWEEN seven and eight thousand miles of concrete roads are being built every year. How does that help the motor truck dealer? A dealer in a rural district sold three trucks during the first three years in his territory. The following year he sold 83 because in the meantime 40 miles of concrete roads had been put down. His only real sales-resistance had been the lack of roads over which motor vehicles could be operated.

The foregoing is a typical example of the position in which many of the country district dealers find themselves today. Most users of transportation at the present time are already fully aware of the advantages to be gained from the use of motor vehicles for the carriage of goods and passengers. But they are also aware that the use of trucks and buses over bad or unmade roads is a costly proposition. What they do not perhaps fully realize is that it would pay them to submit to a certain amount of taxation for the building of roads. Then they could operate their vehicles at a sufficient saving to reimburse them very quickly for the money paid out in taxes.

In other districts where there are roads of a sort, truck owners are not allowed to use them during the winter months. From the truck operator's point of view, such roads represent an absolute waste of public funds. Such roads, however, continue to be built because there is no owners' organization strong enough to combat the political wire-pulling that makes such construction possible. Under this head, too, comes the too frequent imposition of discriminatory taxation that so often falls to the lot of the unfortunate owner of motor vehicles.

Motor truck dealers should realize that what affects the truck user also affects the man who sells the truck. That being so, it is up to the trade to take a closer interest in these matters, not merely individually, but as a whole. Good roads are the first essential for a growing truck industry and the first duty of that industry should be to sponsor road-building programs and educational schemes that will bring to every user, as well as the general public, knowledge of the fundamental advantages of usable highways.

Time and again figures have been published in this publication and elsewhere showing the saving to the operator with various types of road surfaces, yet few if any truck selling organizations use such important data in their advertising matter. If every truck dealer were to make a practice of embodying even a couple of lines of good roads propaganda in every piece of advertising, the benefits to the industry and the country would be incalculable.

Missing Service Profits

BECAUSE the motor truck is a vehicle which is kept in continuous service the year around, the average service station does not believe that the approaching winter season offers any distinct advantages in regards to soliciting business for the service department. Usually the addition of an anti-freezing solution to radiator and perhaps lighter oil in the crankcase is considered by many the only requirements necessary in making the truck ready for the winter months.

They forget the fact that all motor trucks and buses operated in this country are equipped with ignition systems. Every service manager knows that a cold engine, dirty spark plugs, pitted contact points in the timer or magneto, a run down battery and carbonized cylinders in no way helps the performance of any internal combustion engine, much less do they facilitate starting in cold weather. Much time is lost by truck operators every winter, particularly by those who do not have their own shops, or a warm garage, because of starting troubles. It isn't the fault of the apparatus but simply the lack of attention given to these units. And it's usually during the cold weather that this condition manifests itself.

Every service department should find herein a suggestion to check up his owners and sell them the idea of coming in for the winter tuning up. It means giving the truck a new lease of life, a consequent saving of the operators time, better gasoline economy during the winter months and less wear and tear on the vehicle. But the owner cannot be encouraged to take advantage of such a service unless a constructive and determined effort is made to sell him on the idea.

News of the Trade

Program of N. S. P. A.

Over 8,000 Sq. Ft. of Space Will
be Given Over to Replace-
ment Displays

THE following is the announced program of the second annual National Standard Parts Association convention, which will be held in Chicago, Nov. 16-18. Every recognized line of replacement parts will be exhibited at the show.

Monday, November 16

A. M.—Registration and attendance at exhibition.

2:05 P. M.—First session. Delegates, alternates, visitors and press.

Evening—Nothing scheduled.

Tuesday, November 17

9:12 A. M.—Second session. Delegates, alternates and press. No visitors.

2:05 P. M.—Third session. Divisional

meeting, manufacturers and jobbers separate.

Evening—Attendance at show.

Wednesday, November 18

9:12 A. M.—Fourth session. Delegates, alternates and press. No visitors. Business.

2:05 P. M.—Attendance at show.

Evening at 7 P. M.—Banquet at show.

There are 8,000 square feet of space in the exhibition hall and room for upwards of 90 booths, 93 at the most. Only 6 or 7 spaces are left. Every recognized line of replacements parts will be represented.

Names of speakers will be announced later.

Wentworth and Irwin, Inc., distributors of the G.M.C. motor truck in Portland are planning to build in the immediate future, a motor truck service establishment which will be complete in every respect.

Oregon Tax Issue

Governor's Veto Over-ruled and
Tax to be Settled by
Referendum

IN October, a formal decision was handed down by the Oregon Supreme Court, upholding the right of Governor Pierce to veto the bill which provided for a special election to vote on the bus tax and other matters. The legislature passed the bill appropriating the necessary amount to hold the election, but the governor considered this an unnecessary expense. His right to veto this type of bill was contested and the trial was held last June, at which time an informal decision was given. Bus and truck operators previously exercised their right to refer the legislation levying heavy taxes to the voters, and this will be voted on at the next regular election, November, 1926. Meanwhile, the operators do not have to pay these additional taxes.

SHOWS

Atlantic City, N. J., May 17 to 21, 1926—Manufacturers exhibition and 49th convention of the National Electric Light Ass'n. Young's Million Dollar Pier.

Boston, Mass., March 6 to 13, 1926—24th annual show, Mechanics Bldg. (105,000 sq. ft.), direction Boston Automobile Dealers Ass'n. Inc., and the Boston Commercial Motor Vehicle Ass'n Inc. Passenger cars, trucks, tractors and accessories. Chester I. Campbell, Mgr., 329 Park Square Bldg.

Buffalo, N. Y., January 16 to 23, 1926—24th annual show, 174th Armory (55,000 sq. ft.), direction Buffalo Automobile Dealers Ass'n. Passenger cars, trucks, tractors and accessories. Carlton C. Proctor, Mgr., Room No. 1, Hotel Statler.

Chattanooga, Tenn., February 14 to 19, 1926—2nd annual show, Memorial Auditorium, direction dealers of Chattanooga. Passenger cars, trucks and accessories. H. S. Smith, Chairman Show Committee, 528 Broad St.

Chicago, Ill., January 11 to 15, 1926—Annual road show and convention, direction American Road Builders' Association, Coliseum and adjoining buildings.

Chicago, Ill., January 30 to February 6, 1926—26th annual show, Coliseum, direction National Automobile Chamber of Commerce. S. A. Miles, Mgr., 366 Madison Ave., New York City.

Cleveland, Ohio, January 23 to 30, 1926—25th annual show, direction the Cleveland Automobile Manufacturers and Dealers Ass'n. Passenger cars, trucks, accessories and motor boats. Herbert Buckman, Mgr., 5005 Euclid Ave.

Detroit, Mich., November 16 to 21, 1925—1st national motor bus and coach show, Grindley Hall. C. E. Stone, Chief Engineer, People's Motor Coach Co.

Detroit, Mich., January 23 to 30, 1926—25th annual show, Convention Hall, (200,000 sq. ft.), direction Detroit Auto Dealers Ass'n. Passenger cars, trucks, tractors, accessories, power boats and cruisers. H. H. Shuart, Mgr., Hotel Addison.

Indianapolis, Ind., February 15 to 20, 1926—15th annual show, Auto Show Bldg. (70,000 sq. ft.), direction of Indianapolis Auto Trade Ass'n. Passenger cars, trucks and accessories. John Orman, Mgr., 338 N. Delaware St.

Kansas City, Mo., February 12 to 19, 1926—20th annual show, American Royal Bldg. (250,000 sq. ft.), direction of Kansas City Motor Car Dealers Ass'n. Passenger cars, trucks, buses, tractors, accessories, aeroplanes and radio. Geo. A. Bond, Mgr., Firestone Bldg.

Milwaukee, Wis., January 9 to 17, 1926—18th annual show, Auditorium, direction of Milwaukee Automotive Dealers Ass'n. Bart J. Ruddle, Mgr., Room 319, 105 Wells St.

Minneapolis, Minn., February 6 to 13, 1926—19th annual Twin City Show, Overland

Coming Events

Bldg. (400,000 sq. ft., direction Minneapolis Automobile Trade Ass'n. Passenger cars, trucks, tractors, accessories, camping equipment and sportsmen's goods. H. E. Wilcox, Mgr., 1030 Marshall St., N. E. New York City, January 9 to 16, 1926—26th annual show, Grand Central Palace, direction National Automobile Chamber of Commerce. S. A. Miles, Mgr., 366 Madison Ave.

Providence, R. I., February 6 to 13, 1926—2nd annual show, Providence Armory (80,000 sq. ft.), direction Rhode Island Automobile Dealers Ass'n. Passenger cars, trucks, accessories and perhaps radio. Chester I. Campbell, Mgr., 617 Industrial Trust Bldg.

St. Louis, Mo., February 20 to 27, 1926—19th annual show, City Market Bldg. (100,000 sq. ft.), direction St. Louis Auto Dealers Ass'n. Passenger cars, trucks, accessories and boats. Robert E. Lee, Mgr., 3124 Locust St.

San Bernardino, Calif., February 18 to 28, 1926—16th annual show, National Orange Show Bldg. (28,000 sq. ft.), direction National Orange Show Ass'n. Passenger cars, trucks, tractors and accessories. R. H. Mack, Mgr., 215 Chamber of Commerce Bldg.

San Francisco, Cal., January 30 to February 6, 1926—10th annual show, Exposition Auditorium (95,000 sq. ft.), direction the motor car dealers of San Francisco. Passenger cars, trucks, accessories and motor boats. G. A. Wahlgreen, Mgr., 215-16 Humboldt Bank Bldg.

Santa Monica, Cal., May 21 to 25, 1926—Annual United States good roads show, direction United States Good Roads Ass'n. Inc., and the Bankhead National Highway Ass'n. J. A. Rountree, Dir. Gen'l., Maudmont, 3200 Cliff Road, Birmingham, Ala.

Scranton, Penna., January 27 to February 6, 1926—18th annual show, Armory (50,000 sq. ft.), direction Scranton Motor Trades Ass'n. Passenger cars, trucks, tractors and accessories. Hugh B. Andrew, Mgr., Board of Trade Bldg.

Syracuse, N. Y., February 8 to 13, 1926—18th annual show, direction Syracuse Automobile Dealers Ass'n. C. H. Hayes, Mgr., Hotel Syracuse.

Toledo, Ohio, February 8 to 13, 1926—18th annual show, Civic Center Garage (47,000 sq. ft.), direction Toledo Automotive Trades Ass'n. Passenger cars, trucks and accessories. T. J. Cooper, Mgr., 925 Jefferson Ave.

Washington, D. C., January 30 to February 6, 1926—Annual show, Washington Auditorium, direction of Washington Automotive Trade Ass'n., Rudolph Jose, Chairman.

CONVENTIONS

American Road Builders' Association—Annual convention and Road Show, January 11 to 15, 1926. Coliseum and adjoining buildings, Chicago.

Associated Advertising Clubs of the World—Convention, June 20 to 25, 1926, Philadelphia, Pa. Carl Hunt, Mgr.

Automotive Electric Service Association and Automotive Electric Association—Joint convention, February 2 and 3, 1926, Congress Hotel, Chicago.

Michigan Automotive Trade Association—6th annual meeting, January 27, 1926, Book-Cadillac Hotel, Detroit. W. D. Edensburn, Mgr., Hotel Addison.

National Automobile Chamber of Commerce—Second World Motor Trade Congress, January 11 to 13, 1926, New York City.

National Automobile Dealers Association—Annual meeting, January 11, 1926, Commodore Hotel, New York City. C. A. Vane, Mgr., 320 N. Grand Ave., St. Louis, Mo.

National Automobile Dealers Association—Annual convention, February 1 to 3, 1926, Hotel LaSalle, Chicago, Ill. C. A. Vane, Mgr., 320 N. Grand Ave., St. Louis, Mo.

National Electric Light Association—49th convention and manufacturers exhibition, May 17 to 21, 1926, Young's Million Dollar Pier, Atlantic City, N. J.

National Research Council—5th annual meeting of the Highway Research Board, December 3 and 4, 1925, Washington, D. C.

Texas Automotive Dealers Association—Annual convention, May 12 and 13, 1926, Galvez Hotel, Galveston, Texas.

S. A. E.

November 20, 1925, Chicago. Speaker, C. F. Kettering.

November 24, 1925, San Francisco. Subject, Mechanical Traffic Control.

December 10, 1925, Indianapolis. Subject, High Duty Engines.

January 14, 1926, New York City. Annual banquet, Hotel Astor.

January 26 to 29, 1926, Detroit. Annual meeting, General Motors Bldg.

COMING FEATURE ISSUES OF CHILTON CLASS JOURNAL PUBLICATIONS

December 15—Good Roads Number—Commercial Car Journal.

January 1—National Shows Number—Automobile Trade Journal.

January 7—National Shows Number—Motor Age.

January 14—New York Show Report—Motor Age.

February 4—Chicago Show Number—Motor Age.

February 4—Chicago Show Report—Motor Age.

February 18—Statistical Issue—Automotive Industries.

Dodge Financing Details Announced

Plan Calls for 8% on Unpaid Balance,
Plus 80% of Local Insurance
Charges

FREDERICK J. HAYNES, president of Dodge Brothers, Inc., has announced that new financing arrangement affecting insurance charges has been made available to all purchasers of Dodge cars and Graham trucks. Dodge Brothers' credit purchase plan calls for a dollar and cents charge equivalent to 8 per cent on unpaid balance, plus an amount approximating 80 per cent of the local charges for fire and theft insurance in the section in which the car is bought. On a \$1,500, car the charges, after deducting down payment of one-third, will be approximately \$80 plus 80 per cent of the amount of the fire and theft insurance rate quoted in the community of purchase. The arrangement protects against fire and theft to an amount equivalent to 90 per cent of f. o. b. price. The plan entered into with the Commercial Investment Trust Co. and offered to all Dodge dealers is said to make it unnecessary for the purchaser of a Dodge car or a Graham truck, desiring credit, to pay more than the rate quoted. At the same time, the plan facilitates an insurance arrangement, which is described as not prohibitive or productive of higher financing costs.

Traffic Increases on Jersey Highways

So great has been the increased use of the Lincoln Highway in New Jersey that what was once considered heavy truck traffic has developed into convoys and caravans of high-speed trucks lasting throughout the day and night during the entire year. This route is kept clear of snow throughout the winter.

On April 13, 1925, 4,789 vehicles passed a given point over a period of 16 hours. On April 11, when the number of vehicles passing in a 16-hour period was 1,946, there were 369 trucks, 180 of which were of the heavy, high-speed type, while on the day of the Princeton-Harvard football game, November 10, 1923, the traffic check showed 13,074 vehicles passing a given point on the route. Of these, 1,029 were motor trucks, 484 of which were of the heavy type. On the day of the Princeton-Yale football game, November 15, 1924, the traffic was at the rate of one car every 3 seconds.

The usual traffic which this road carries might be termed "terminal traffic," for it is the main highway between New York City and Philadelphia, and over it must go those great highway transports which ply between these terminal cities. Further, between New York and Philadelphia lie such important industrial communities as Jersey City, Newark, New Brunswick, Trenton and Camden, and travel from and to these points is far from small.

With the opening of the Holland Vehicular Tunnel between New York City and Jersey City in about a year, and the completion of the great viaduct and State highway passing through the heart of Jersey City, this eastern section of the Lincoln Highway will receive even heavier and more intensive traffic.

Talk About Competition!

Competition for passenger traffic over the Massachusetts highways was just as keen in 1825 as it is in 1925. In 1802 the old Norfolk & Briston Turnpike Company was organized to run a bee line between Boston and Providence and it passed through the Western part of Foxboro known today as Washington street. Some 40 coaches per day passed through town drawn by four prancing horses. The trip was made in four hours and 50 minutes and cost the passenger \$3.

A rival company lowered the price to \$2.50 and then the companies alternated in cutting the price until the old company began carrying the first booked passengers for nothing. The new line met this with an offer to carry patrons free and at the end of the journey provide every passenger with a free dinner.

"The old company went this offer one better. In addition to a free trip the passenger got a free dinner with a bottle of wine thrown in. As a result of a gay crowd of young Bostonians started out on Monday and had a free ride, dinner and bottle of wine at Providence. Tuesday they came back to Boston free and partook of the meals and wine. This they kept up until Saturday night making it a motor vacation costing only for lodging three nights at Providence.

Finally the officials of the two companies saw that they were heading for financial chaos and held a meeting at which both agreed upon a fare of \$2."

Two Western Cities Adopt Gas-Electric

Buses equipped with gas-electric drive are to be introduced in two cities of the far west. Los Angeles and Portland have made arrangements for operation of the new type of units, thereby joining the ranks of Philadelphia, Atlanta, Ga., Albany, N. Y., and Kansas City, Mo.

The Los Angeles Railway Corporation is to operate a double-deck bus over one of its routes. The Portland Electric Power Company will use five single-deck buses on one route. Two of the Portland and the Los Angeles buses are of Fageol manufacture; the other three for Portland are being equipped by the Yellow Coach Manufacturing Company. The electrical equipment is being furnished by the General Electric Company.

Des Moines Bus Service

Capital City Motor Coach Company
Organized With \$300,000 for
Bus Service

ALTHOUGH the announcement a few days ago of the organization of the Capital City Motor Coach Company, a \$300,000 corporation, to establish a complete bus service for Des Moines, has been viewed as a new move in the efforts of the Des Moines City Railway company to bolster its finances and put itself on a basis satisfactory to its officers, John F. Loveridge, former theatrical manager, who arrived here this week announced that the concern has no affiliation with the traction interests. Mr. Loveridge is president and general manager of the company, it was stated, although an earlier announcement listed a group of officers that was apparently temporary.

Fifteen traffic engineers are expected within a week to make a survey of conditions, route buses, prepare to talk franchise conditions with the council, which is said to be antagonistic to the plan, and launch the company with promise that buses will be operating before the holidays.

Double and single-deck buses are to be operated, Mr. Loveridge said, with capacity of 62 and 29 persons respectively. The number of buses has not been determined. The Coach Company will operate only over boulevards and streets not served by the traction line and will be emphasized as a non-competitive traction service. A large garage in the central section of the city is also scheduled for construction.

M. A. M. A. Allots Space for National Shows

Nearly 100 manufacturers of motors, parts, accessories and service equipment have been assigned space in the National Automobile Shows of 1926 in the first allotment just made by the Motor and Accessory Manufacturers' Association.

Exhibiting members of the M. A. M. A. represent virtually all products of the industry except completed vehicles. Some of the exhibitors are numbered among the largest companies of the industry and several have shown in every one of the National exposition held since the first shows were staged in New York and Chicago in 1900.

The M. A. M. A. co-operates with the National Automobile Chamber of Commerce, which conducts the show on behalf of its car manufacturing members.

Additional allotments to M. A. M. A. members will be made between now and show time.

The address of the Chicago office of the Brown-Lipe Gear Co. has been changed from 1028 Standard Oil Bldg. to 1015 Standard Oil Bldg., 910 S. Michigan Ave.

Detroit Bus Show

85 Firms Expected to be Signed
Up for Space Before Opening
Day

WITH the opening of the first National Motor Bus Show to be held in Convention Hall, Detroit, November 16 to 21 inclusive, 57 firms directly connected with the bus industry have signed for space. Before the opening day, at least 25 more firms are expected to have taken booths, bringing the total number of those that will exhibit up to approximately 85.

Concessions and other organizations have signed for 10 booths so that show officials expect at least nine-tenths of the spaces to be occupied by the time the doors are open to the public.

The announcement made by Henry Ford that one of his Stout built all-metal airplanes would be on exhibition with mechanics available to explain its workings has, according to C. E. Stone, chairman of the general committee, assured the show of being an unqualified success.

The list of firms who have already signed for space follow: Fitz Johns Body Company, Puro Manufacturing Co., Denby Manufacturing Company, Graham Bros., Reo Motor Car Co., Gotfredson Corporation, Commerce Motor Truck Co., Dorris Motors, Inc., American National Omnibus Co. (Gray Manufacturing Company), Studebaker Corporation of America, Continental Motors, City of Detroit Department of Street Railways, Skinner Automotive Device Company, Timken-Detroit Axle Company, The Auto Body Co., Bragg-Kleisrath Co., Greenleaf, Inc., Bus Transportation Magazine, Michigan Highway Association, Cornelius T. Meyers, Black and Decker Mfg. Co., Christensen Air Brake Co., English and Mersick, Baynes & Krentler, Nicholas-Lintern Co., Better Buses Magazine, Taxicab Journal, Automotive Daily News, Detroit Automobile Club, Thompson Research, Inc., Yellow Jack-It Mfg. Co.

Chilton Class Journal Co., Gruss-Detroit Company (Cleveland Pneumatic Tool), Electric Storage Battery Co., Kysor Heater Co., E. I. DuPont de Nemours, Gabriel Snubber Sales & Service Co., Ruggles Motor Truck, Eisemann Magneto Corp., The Fageol Co., Brown-Lipe Gear Co., Electric Service Supply

Co., Willard Storage Battery Co., C. G. Spring & Bumper Co., The Six Wheel Co., The Steel Products Co., Yellow Coach & Manufacturing Company.

Chevrolet Motor Company, Michigan Replacement Parts Co., U. S. Rubber Co., The Texas Co. of N. Y., Rollway Bearing Company, Waukesha Motor Co., Ford Motor Co., National Cash Register Co., Clark Equipment Co., Long Mfg. Co., Ross Gear & Tool Co., Joseph Weidenhoff, K. P. Products Co., Ternsted Mfg. Co., Stromberg Motor Devices, Lorraine Sales Co.

Where You Don't Go

No Doctor is likely to accept advice from his patient.

No Engineer is likely to take suggestions on engineering made by his golfing friends.

No Lawyer has much respect for the legal opinion of his clients.

No Dealer credits his customers with a great deal of knowledge about the trade.

The Expert does not accept the opinion of the layman.

The Layman accepts the opinion of the expert.

Influence comes from the authority.

Reaching the trade through the trade press is reaching the user through his authority.

A Tractor-Trailer Type Bus

C. W. Harris is establishing a bus building plant at Sacramento, Cal., for the construction and assembly of a new type of street car bus. The bus, a demonstration model of which is now under construction, is of the tractor and semi-trailer type. The tractor consists of a close-coupled tractor or truck and the passenger compartment is mounted on a long semi-trailer, the two being so built as to give a unit appearance when attached.

Harris, who is former general superintendent for A. Meister Company, California body builders, claims as advantages for this type of bus: shorter turning radius, lower floor for bus, less danger of skidding or upsetting, detachable power plant and simpler construction. A Fordson tractor, specially geared, probably will be used on the demonstration model.

Electrical Exposition

Latest Electric Truck Models Were on Display. Improvements in Design and Capacity

THE 1925 Electrical Exposition held at the Grand Central Palace, New York City, Oct. 14-24, was of particular interest to electric truck owners. Here were on exhibit a full representation of electric truck chassis and bodies by all of the electric truck manufacturers.

One new model, a 5-tonner manufactured by the Electruck Corp., New York, was on exhibition. The other exhibits featured new body designs in conjunction with the stripped chassis.

The 5-ton Electruck has a cruising radius of from 50 to 75 miles at a sustained speed of 14 m. p. h. In a recent test run, one of these models carrying no load, made the run from New York to Philadelphia on a single battery charge at an average speed of 13.5 m.p.h. It is claimed that the batteries had sufficient voltage to give 20 additional miles. Two 42-cell batteries are used. This truck has seven speeds forward, the sixth and seventh speeds throwing the batteries into series, thus doubling the voltage so as to give a speed of 25 m.p.h. on the level and in addition enough power to maintain an average speed of 14 m.p.h. on hills.

The motor's maximum horsepower is 130. Another feature is an electric brake which is put into operation when the motor is disconnected from the batteries. The latter are then short-circuited one against the other to give sufficient brakeage to hold the truck on a down-grade down to 6 or 8 m. p. h. In addition to this braking method, the truck is equipped with four expanding brake shoes in each drum.

Other exhibitors included the Commercial Truck, Walker, Autocar, O-B and Ward companies. The C-T company showed a chassis mounted with a demountable steel van body used for household furniture storage in a warehouse. It also showed a laundry body featured by a wide entrance and direct opening to inside the body. This type of body is designed to speed up deliveries and pickups in the laundry field.

The Walker company showed two chassis as did the Autocar company. The O-B company chassis that was shown incorporates an auxiliary cross spring suspension at the rear that comes into full play with a full load. This spring is mounted on two plates attached over the centers of the regular springs. No intermediate speeds are used on this truck, the speed picking up automatically. The Ward company showed a 1-ton bread body incorporating a full open entrance with step mounted on the front end instead of at the side. This company also incorporated these quick loading and unloading features in a laundry body. In both cases, dome lights were mounted inside the body and entrance to the body was afforded direct from the driver's compartment.

U. S. Department of Commerce Production Figures
(Number of Machines)

	Passenger Cars			Trucks		
	1923	1924	1925	1923	1924	1925
January	228,872	293,824	212,909	20,569	30,741	28,099
February	260,336	343,460	252,785	23,352	32,910	34,334
March	327,059	357,045	332,108	36,737	36,444	45,012
April	351,649	346,405	391,301	39,759	37,948	47,664
May	358,685	286,324	382,714	45,829	35,314	43,223
June	344,026	225,079	364,806	42,568	29,067	37,890
July	303,544	244,544	357,883	31,830	26,391	39,211
August	318,888	255,232	221,756	32,311	28,647	37,643
September	302,352	263,528	.....	29,721	31,960	.....
October	338,485	260,881	.....	31,612	32,475	.....
November	288,813	204,343	.....	29,255	27,905	.....
December	279,864	182,099	.....	28,990	27,542	.....
Total	3,702,569	3,262,764	.....	392,533	377,344	.....

Improved Roads to be Studied

Good Roads Convention Will Discuss Subject Completely

THE perfection of a national highway system embracing 50,000 miles of improved roads and connecting all the states and the larger cities, preliminary steps toward which were taken at a recent conference of Federal and state highway officials in Washington, will be one of the matters fully discussed at the convention and machinery exposition of the American Road Builders' Association to be held in Chicago, January 11-15, next. The new national highway system is to be protected by the government in conjunction with the states through Federal aid. The routes will be marked and operated by the states.

On account of the great number of Federal, state, county, township and city highway officials, engineers, contractors and machinery and material men attending the convention, President W. H. Connell of the American Road Builders' Association, has divided the program of the convention into two divisions, one especially attractive to engineers and highway officials, and the other to contractors and machinery and material manufacturers and dealers. Frank Sheets, state highway engineer of Illinois, and treasurer of the American Association of State Highway officials, is in charge of program for highway engineers and officials and S. M. Williams, vice president of the Autocar Sales and Service Company, is in charge of the contractors' program.

Gramm-Kincaid Moves Into New Plant

The Gramm-Kincaid plant, but recently occupied, is situated on 8.5 acres of ground and is right next to the City Park of Delphos, Ohio.

While the general offices are retained at Lima, the company decided on its new plant site, 14 miles from the office for the reasons of ideal surroundings, freedom from all labor difficulties and a much lower cost in plant operation.

The plant has been laid out with the idea of the economical production, based on the new standardized interchangeable plan.

One building is devoted entirely to service. Its personnel comprises a day and night force whose ambition is to

not only give instant service, but economical service.

The two main buildings are of the latest type of construction. Monitor roofs, steel sash, correct illumination, and traveling cranes roughly give an idea as to the general layout. The main assembly, machine, paint and body departments and final assembly covers 70,000 sq. ft. of floor space.

Weaver Building Laboratory Garage

Construction has been started on a new garage and service building to be used for laboratory and test purposes by the Weaver Manufacturing Company, Springfield, Illinois, makers of garage and shop equipment. The new building, which will have a frontage of 125 feet, is located across the street from the Weaver office.

One of the major considerations in erecting this building is to enable the experimental and engineering departments to keep in close touch with the new developments, test Weaver products in every day service, work out improvements and develop new items in anticipation of actual demand. In the past this development and test work has been handled through the co-operation of local garages; the new garage will make possible more thorough research and development work.

Operating on the same self-supporting basis as any other service station, the new garage will render all kinds of automotive service to the general public. Each department will be expected to pay its own way.

Attractive appearance and maximum light are features of the new building. The mechanical department has been given equal prominence with the car sales and accessory sales divisions of the new garage, the entire front of the building being given over to these three departments and two entrance doors. The machine shop is located in one front corner of the building, with a large display window to give it prominence. The service department immediately back of the machine shop occupies one entire side of the building.

Storage space for 45 cars, as well as a repair shop accommodating 10 to 12 cars, will be provided, all on one floor.

A new Atlas of Traffic Maps, prepared by Wayne E. Butterbaugh, and published by LaSalle Extension University, is announced as just off the press. It has been greatly revised since the first 1925 edition.

51 Railroads Use Buses to Date

Increase of 16 Shows Growing Realization of Their Value

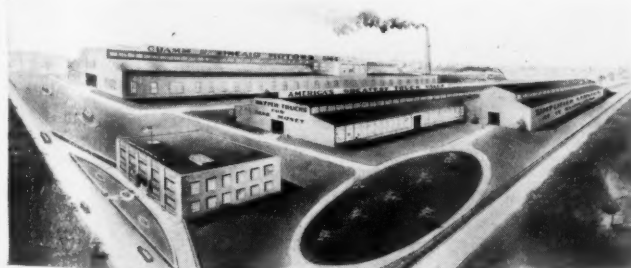
INCREASING use of motor vehicles by railroads and traction lines is shown by the fact that 51 steam railroads are now using motor trucks for freight hauling, against 33 a year ago.

The motor truck department of N. A. C. C., through a survey, learns that 15 railroads are considering the introduction or extension of motor truck service; that 20 railroads now use more than 219 motor buses; that 18 not using buses, are considering an auxiliary bus service; that 190 steam and electric lines are using more than 496 rail motor coaches; and that 18 other roads are investigating the use of such coaches. Thirty railroads have contracts with terminal companies in Cincinnati or St. Louis for motor truck interchange of less than a carload of freight; 8 use trucks to replace trains carrying package freight, and 10 give store door delivery by truck. Ten have established motor truck routes parallel to rail lines; 5 have substituted buses for branch lines, and 2 are using buses as feeders through territory not previously served by rail.

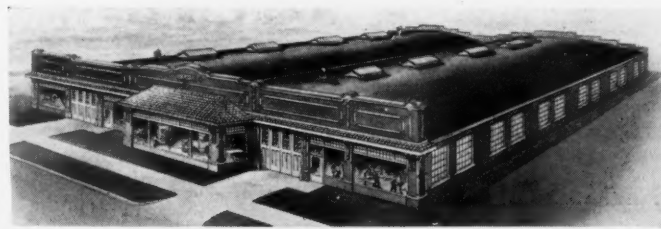
To Build 61 Standard Models of Bodies

The American Body Company of Dallas, Texas, one of the largest manufacturers of commercial truck bodies for all makes of automobile trucks in the southwest, applied recently through their attorney, Clifton A. Davis, for charter to establish the American Body Company of Louisiana. The charter, as filed with D. B. Webster, parish clerk, calls for a corporate existence of 99 years, with a capital stock of \$25,000. The majority of the stockholders are Shreveport residents. A. L. Walker, the president, and O. S. Woods, the first vice-president, are Shreveport men.

The Louisiana concern was opened for business recently in Agurs near the Market Street bridge, a short distance from the business center of Shreveport. The company will manufacture 61 standard models of commercial truck bodies and special build bodies of all kinds for all makes of trucks. Besides the hardwood bodies, they will specialize in the manufacture of steel panel bodies with a Duco finish.



View of the new Gramm-Kincaid plant



Recently completed Weaver laboratory garage

Operators Confer on Bus Legislation

Confident of Harmonious Stand on Regulation Program

CONFIDENCE that the bus operators of the country will be able to reach an accord with the other bodies interested in the question of legislation of passenger motor vehicle common carriers engaged in interstate commerce was expressed by representative bus operators from various parts of the country, following a two-day conference held at the National headquarters of the American Automobile Association. Among these bodies are the National Association of Railway and Public Utility Commissioners, the American Railway Association and the American Electric Railway Association.

The conference is one of a series in which the bus operators are participating in order that they may develop a harmonious stand on a legislative program of regulation suitable to the needs of common carriers engaged in the business of motor transportation. The next meeting of the committee will be held in Detroit in connection with the National Motor Bus Show, November 16-21.

Rushmore's Patent Awarded Priority

The United States Patent Office has handed down a decision in the interference suit of Wellington W. Muir, of the Harrison Radiator Corp., vs. Samuel W. Rushmore, of the Rushmore Laboratory, of Plainfield, N. J., awarding to Rushmore priority of invention for a steam cooling system for internal combustion engines on motor vehicles.

The Rushmore cooling system is in a way intermediary between the air cooling and the ordinary water cooling system. Water is used as the cooling medium, but the jacket outlet temperature is constantly maintained near the boiling point of water. Ordinarily there is little or no water in the radiator above the bottom tank. The radiator core is filled with steam to a certain height, depending upon the relation between heat absorption in the cylinder jackets and heat dispersal per unit of core surface of the radiator.

G. T. D. Small Tool Catalog

The Greenfield Tap & Die Corp., Greenfield, Mass., have just issued their new small tool catalog. This book contains a wealth of catalog information presented in a simple and effective manner. Illustrations and classification facilitate ready reference. Briefly, any information pertaining to this business can be obtained somewhere within its 383 pages. Copies of this catalog have been distributed to the trade and anyone who hasn't received a copy can secure one by applying direct to the Greenfield Corporation.

In this new catalog Ground Thread Taps and Spiral Fluted Staybolts are

listed. The company's complete line of gages also appears for the first time in this issue, as also its bolts and pipe threading machines.

The company has recently adopted a special method of packing its screw plates for the domestic market, which method will be of considerable interest to buyers. The method is described fully on page 13.

Builds in Jackson, Miss.

The southern plant of the Martin-Parry Corp. will be located in Jackson, it has been announced here by J. A. Callahan and Henry Kawn, who will be general manager and manager, respectively, of the local plant. Construction is to start at once and the officials expect to have the plant in operation by the middle of the winter. The Martin-Parry Corp. is one of the largest builders of auto truck bodies in the United States.

One of the main arguments offered by Jackson business men for location of the plant in their city was the proximity of Jackson to the hardwood centers of Arkansas, Louisiana and the Mississippi delta, and also the yellow pine belt.

The initial plant of the corporation will cover 150,000 square feet and employ 400 or more workmen. This plant will be the second to be owned by the Martin-Parry Corp. in Mississippi. The first, at Lumberton, was destroyed by fire several months ago. A branch of the Martin-Parry Co. has also begun operations at Janesville, Wis., in the building formerly used by the Robert Buggs Motor Sales Co.

J. T. Frost, who has been with the Martin-Parry branch at Flint, Mich., will be supervisor of the Janesville branch, and James Hanson, formerly of the Milwaukee unit of the company, is shop foreman. R. A. Weber, also of Milwaukee, will be sales representative in Janesville territory.

Assembly work only will be handled at the Janesville plant, parts being shipped direct from the main factories at York, Pa., and Indianapolis.

10 Applications Per Day

According to a report received from the truck and motor bus division of the Public Utilities Commission in Ohio, applications are coming in at the rate of between eight and ten per day, for certificates of necessity and convenience. Comparing the ratio of truck routes to that of motor buses, the former has the edge by four or five to one.

Of the most recent truck companies for application of certificate is that of the J. E. Miller Transfer & Storage 10 12th street, Wheeling, W. Va., which asks for two certificates, one interstate and the other intrastate. Both are irregular routes, using seven motor vehicles in the operations. Number of trips to be made daily is as yet undecided. Hearing has been set for November 12, at the utilities commission.

Automotive Interests Combine in Oregon

State-Wide Association Formed to Protect Every Interest

OWNERS and operators of automotive vehicles of all kinds, as well as distributors and dealers in these vehicles, and manufacturers of equipment for them in Oregon have organized a state-wide association under the name of the Oregon Motor Conference, according to reports received by officials of the San Francisco Motor Car Dealers' Association.

Included in the organization are the Oregon Auto Freight Association, the Oregon Automobile Dealers' Association, the Oregon Automotive Trades Association, the Oregon Motor Stage Association, the Oregon State Motor Association, the Portland Draymen's and Warehousemen's Association, and the Portland Industrial Traffic Club. The association was brought about because of the experience of all the organizations named that they could accomplish more when banded together than when operating each in its own individual field.

Problems, of operation, distribution, sales, traffic, road-building and maintenance, taxes and license fees are to be taken up, and the strength of the state-wide association used to obtain the passage of legislation giving owners and operators of commercial vehicles, and dealers in automobiles, a square deal.

India Rubber Celebrates Its Fourth Annual Pacific Anniversary

Tire dealers to the number of 125, selling the products of the India Tire & Rubber Company in every city of the Pacific Coast, met in annual meeting at San Francisco in October, at the call of J. M. Alderfer, president of the corporation. The meeting, which lasted two days, also took the form of a celebration of the fourth anniversary of the entry of the India company into the Pacific coast.

The meeting was devoted mainly to getting acquainted, and to a discussion of the tire situation by Mr. Alderfer, who announced sharp increases in tire prices, with the forecast of still further advances in the near future. F. L. Ryan, Pacific coast district manager, and Frank T. Price, president and general manager of Nelson & Price, of Los Angeles, largest distributors of India tires in the United States, also spoke.

Establishment of a motor bus service between Washington and Philadelphia was asked by the Red Star Line in a petition filed this week with the Public Utilities Commission. The petition doubtlessly will be granted and service is scheduled to start November 16. The fare is announced as \$5 one way and five buses are to operate on the line, making two trips a day.

More rolled steel truck wheels every day!

-resiliency
-strength
-ruggedness
-long life



BETHLEHEM STEEL COMPANY. General Offices: BETHLEHEM, PA.

District Offices in the Following Cities:

New York	Boston	Philadelphia	Washington	Pittsburgh	Detroit	St. Louis
Baltimore	Atlanta	Cleveland	Cincinnati	Buffalo	Chicago	San Francisco

BETHLEHEM

Court Protects Taxi Color Scheme

A Distinguishing Mark Shall Not be Used by a Competitor

The recent decision by Justice Levy of the New York State Supreme Court in favor of Luxor Cab Manufacturing Corp. against Leading Cab Co., Inc., reaffirms the legal principle that whereas, as a general rule, no one has a monopoly of a color, nevertheless where a merchant uses a certain color combination as a distinguishing mark for his goods, no other person may use it on the same class of merchandise with the design to market his goods as those of his competitor.

Justice Levy said that although official restraint of the dress of goods dealt largely with package merchandise, its necessity was even more apparent in the case of taxicabs, since the color scheme of the cab attracts the eye to the moving vehicle. The Court found that the defendant had been selling taxicabs which have a color combination identical with that of the plaintiff. The defendant obtains the chassis from the Van Alstyne Motor Corp., selling agent for Hupp Motor Corp., and the body from other sources. A temporary injunction against the Leading Cab Co. was granted, the motion against the Van Alstyne concern denied and that against the Hupp Corp. withdrawn by consent.

The decision urged public authorities to guard the public against cabs whose color and dress deceive the patron into believing that he is hiring a lower rate vehicle; but Judge Levy specified that in the case at hand the deception as to rates did not apply.

New N. E. Catalog

The new catalog No. 100-E just published by the North East Electric Company, Rochester, N. Y., presents in a simple and comprehensive manner, illustrations and lists of North East units that are in current production. The twenty-five quality stock pages of this 8½ x 11 in. catalog are unusually well laid out. The half tones and mechanical views, of which there is a profusion together with the essential specifications and dimensional data, quickly provides the interested reader with all the information that may be desired on any particular unit. Among the units displayed are generators, starting motors, ignition-generators, ignition units, timer-distributors, ignition coils, starting switches, cut-outs, control units, switch and fuse boxes, horns, horn brackets, terminals and signal buttons and speedometers. Readers of Commercial Car Journal may obtain copies by writing to the company.

Goodyear Reserve Intact

Indications are that the \$3,000,000 raw material reserve set aside by directors of the Goodyear Tire & Rubber Co. at the end of the first six months will either remain intact or be carried to surplus at the close of the year.

The reserve was to provide for any

possible loss that might occur from depreciation of the price of crude rubber. Continued firmness of the crude rubber market around \$1 a pound, with prospects that it will continue at or near this level for some time to come, will obviously preclude any possibility of loss from this source. Furthermore, there are only two more months in its fiscal year.

The Brown Auto Carriage Co., Cleveland, Ohio, maintaining sales quarters in addition to operating a large repair shop, has just moved into enlarged quarters at 3818 Superior Ave.

The company has just taken on territorial distribution in northern Ohio for the Stoughton Body Company line of light truck bodies, heavy duty truck bodies and cabs. The company is under the management of A. J. Hollingshead, manager, and Charles R. Clark, superintendent.

J. H. Appleby is the new district manager of the India Tire & Rubber Co. of the Chicago and Milwaukee territory. Mr. Appleby was formerly sales manager of the Denman-Meyers Cord Tire Company.

W. C. Betsch, who for four years was the New York representative of the Budd Wheel Co., has resigned his job to enter the real estate business in Florida. He carries with him the well wishes of his many friends in the automotive industry.

Percy E. Chamberlain has joined the Nordyke & Marmon Co. as sales manager. Mr. Chamberlain is well known in the industry and through his experience has contributed largely to the elevation of the service shop of today.

J. N. Dunlevy, formerly business manager of the Palmer Art Studio of Akron, has been placed in the advertising and sales promotion division of the India Tire & Rubber Company. He will work with J. B. Mills, who is in charge of this department.

C. J. Helm has retired from activities as secretary and general manager of the Acme Motor Truck Company. He will continue, however, as a member of the board of directors. Mr. Helm, who has suffered a partial nervous break-down, is planning to spend the winter in Florida where he hopes to recuperate. Mr. Helm has served as secretary and sales manager for eight years and the past two years as general manager. No announcement has been made as yet concerning his successor.

A. G. Hertzler, for many years with the Bearings Company of America and more recently with the Steel Industry in California, has recently become associated with the sales department of the Pacific Sheet Steel Corporation of South San Francisco, Cal.

Arthur E. Holm has joined the Gabriel Snubber Co. in the capacity of supervisor of sales and service. Mr. Holm was formerly connected with the Ford Sales organization in Chicago for the past several years.

P. W. Hood, vice-president in charge of sales for the Timken-Detroit Axle Company, has returned to his desk after four months of absence resulting from ill health. Mr. Hood has been with the organization since 1911.

Edward D. Kilburn, vice-president and general manager of the Westinghouse Electric International Company and Walter S. Rugg, general sales manager of the Westinghouse Electric & Mfg. Co., were named vice-

American Hammered Announces New Price Cut

Quantity production, induced by heavy demands for the special Ford Ring is the explanation offered by the American Hammered Piston Ring Co. for its latest reduction to 25 cents list each. It is explained that there has been no change in quality of materials.

The American Hammered Piston Ring Company is protecting its dealers against this price decline by rebating them for any rings still in stock.

The Red Star Transportation Co. announces through the headquarters of the Ohio Motor Bus Owners' Association that it has placed in service between Cambridge and Zanesville, Ohio, eight new 18-passenger buses. These are kept more for emergency purposes in order to take care of the increasing traffic between those points.

Personals

presidents of the latter company by the recent meeting of the board of directors in New York. Messrs. Rugg and Kilburn will take charge respectively of the engineering and sales activities of the organization.

Morton A. Netter, operating under the name of Netter-Stewart Truck Co., 4721-23 Chestnut St., has recently been appointed Stewart distributor for this district. Mr. P. T. Dennett has been appointed manager of the new New England branch located at 195 Massachusetts Ave., Cambridge, Mass.

W. L. Poynter has joined the sales force of the Black & Decker Co. and will operate from the Kansas City branch. Mr. Poynter succeeds A. D. Geiger who was promoted to manager of the Black & Decker Boston branch.

R. C. Rueshaw, sales manager for the Reo Motor Car Co., has resigned his position while retaining his seat on the board of directors. He is succeeded by C. A. Triphagen who has been assistant sales manager for the past three years. Illness is given as the cause of his resignation.

Henry G. Shirley was unanimously chosen as president of the American Road Builders' Association for 1926 and 1927 at a recent meeting of the nominating committee. Nomination is practical equivalent to final election as the committee recommendation is accepted as a matter of form.

E. C. Shumard, who recently resigned as manager of the U. S. Motor Truck Co., is now engaged in consulting work, and has been retained by a large eastern corporation to design, build and develop a 21-passenger bus to be produced and marketed by the company.

Eugene J. Weber died at his home in Stockton, Cal. He was formerly associated with the Case Threshing Machine Co. and later with the International Harvester Co. and the California Tractor Co. He was general manager of the latter company at his death.

W. C. Withers has joined the sales force of the New York branch of the India Tire & Rubber Co. Mr. Withers who has been in the tire selling field for twelve years will cover the metropolitan territory. He formerly did special sales work for Goodyear and has also represented Republic in this district.

B. B. Wright has been appointed manager of the Jacksonville, Fla. branch of the India Tire & Rubber Co. Mr. Wright was formerly assistant manager of the Dallas branch.



When Control Counts!

ICY PAVEMENT . . . slush-filled holes of unknown depth, ready to jerk the wheel from the hands of the unwary. All the essentials for a dangerous skid! But not with a Ross Cam and Lever Steering Gear. With a Ross the wheel will stay put—no matter how deep the holes. No chance for it to get away. Under every condition Ross gives ease and certainty of control.

ROSS GEAR AND TOOL COMPANY, 760 Heath Street, Lafayette, Indiana

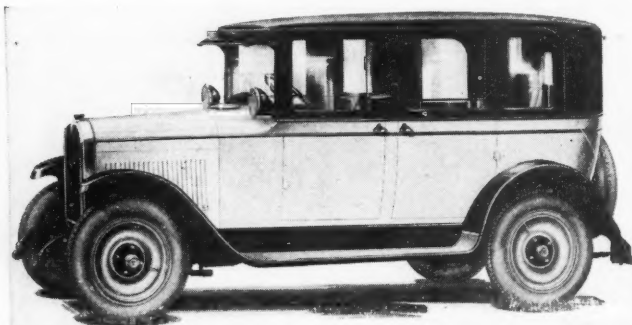
ROSS
CAM and LEVER  **STEERING GEARS**

EASIER STEERING LESS ROAD SHOCK

New Yellow Protects Driver

A new Yellow taxicab, resembling a conventional sedan in appearance, mounted on a 114-in. wheelbase chassis, has been brought out by the Yellow Cab Mfg. Co.

Major changes incorporated in the new cab, which is designated as type O-5 and as the "Mile Merchant," are the fully enclosed driver's compartment and a larger and roomier passenger compartment seating six persons. Despite the longer wheelbase, the turning radius is the same as for the 109 in. model. Rubber shock insulators are used and other



The new 114 in. wheelbase Yellow resembles the conventional sedan in appearance.

features include balloon tires, air cleaner and throttle controlled oil pressure.

The engine is a sleeve valve type with a 3 7/16 in. bore and a 5 in. stroke. Pistons are of cast iron and are 4 in. high with 3 3/16 in. rings. Three bronze backed bearings support the crankshaft, the diameters and lengths of these bearings from front to rear being respectively 2 5/32 x 2 7/16 in., 2 7/32 x 2 7/16 in. and 2 9/32 x 3 5/16 in. Force feed lubrication is provided by a gear oil pump driven off the eccentric shaft. Cooling water is circulated by thermosyphon and the fuel feed is by gravity from a 14-gal. tank mounted in the cowl. Electrical equipment includes Bosch magneto and a North East six-volt generator with voltage regulator. Starting motor and battery ignition are furnished at extra cost.

Other units entering into the assembly are a multiple disk clutch, three-speed transmission, Spicer propeller shaft, and

semi-floating rear axle with a reduction ratio of 4.9 to 1. Service brakes act externally on rear wheel drums with a diameter of 15 1/2 in. and a width of 2 1/2 in., while the emergency is on the transmission, its dimensions being 8 1/4 x 2 in.

Semi-elliptic springs, 2 1/4 in. wide, are used all around, those in front being 39 in. long as compared with 57 in. at the rear. Frame side channels have a maximum depth of 6 3/16 in. and are pressed from 1/4 in. stock. The tires are 30 x 5 in. mounted on 20 in. disk wheels using Firestone type B rims.

Lighting equipment consists of tail-light, dome-light with automatic door switch, meter light, vacant light, cowl lights and spot-lights. Head lamps are extra equipment.

Service Car for Increasing Scope of Business

Dealers, shop owners and service stations alert to new ways to keep the shop busy and increase profits will be interested in the wrecking car illustrated, which amply meets the requirements of the average garage with a modest outlay.

The truck is a standard Ford 1-ton job. The inside dimensions of the body are 40 in. wide by 76 in. long, affording ample room for a wrecking crane, ambulance, towing pole and gasoline can. A shorter body, 52 in. long and of the same width is also available for 3/4-ton trucks. These detachable bodies can be purchased separately from Ford dealers and can easily be applied to Ford or other cars of similar dimensions.

The crane is indispensable for handling general towing work and has ample strength and leverage to lift loads up



This service car designed to meet every requirement was designed and equipped by the Weaver Mfg. Company

to 6,000 lbs. The height of the boom can easily be adjusted by one man, using the crane's own power, and the load can be lifted by the operator while standing either on the ground or in the service.

The ambulance is handy for minor front or rear end wrecks and can easily be run under either the front or rear axle of the disabled car. It can also be used to advantage with the crane when both wheels on the same side are out of commission.

The towing pole is used with or without the crane to prevent the wrecked car from jamming into the service car on down grades and sudden stops. Its length is adjustable and the heavy coil spring lessens shocks when stopping or

The service car offers a convenient means for refueling standard cars on the road, the flexible hose readily reaching the opening of any gas tank, no matter how obstructed by tires. The can is made in two sizes, 5-gallon and 2-gallon capacity.

The crane, ambulance, towing pole and service can are made by the Weaver Manufacturing Company, Springfield, Illinois.

Blancke Automatic Control

A. C. Blancke & Co., 602 West Lake St., Chicago, Ill., has developed a new universal design of its Automatic Thermostatic Carburetor Control for Fords of every type and model. This is accomplished by the changes made in the shape of the bracket and changes made in the new type fork. This fork is provided with two prongs which fit in the two holes in the crossbar at the top of the old style carburetor needle. On the new style carburetor needle this same fork can be opened by a slight bending so as to clamp on the center of the universal joint. That feature enables this one design to fit on models of Fords of all years.

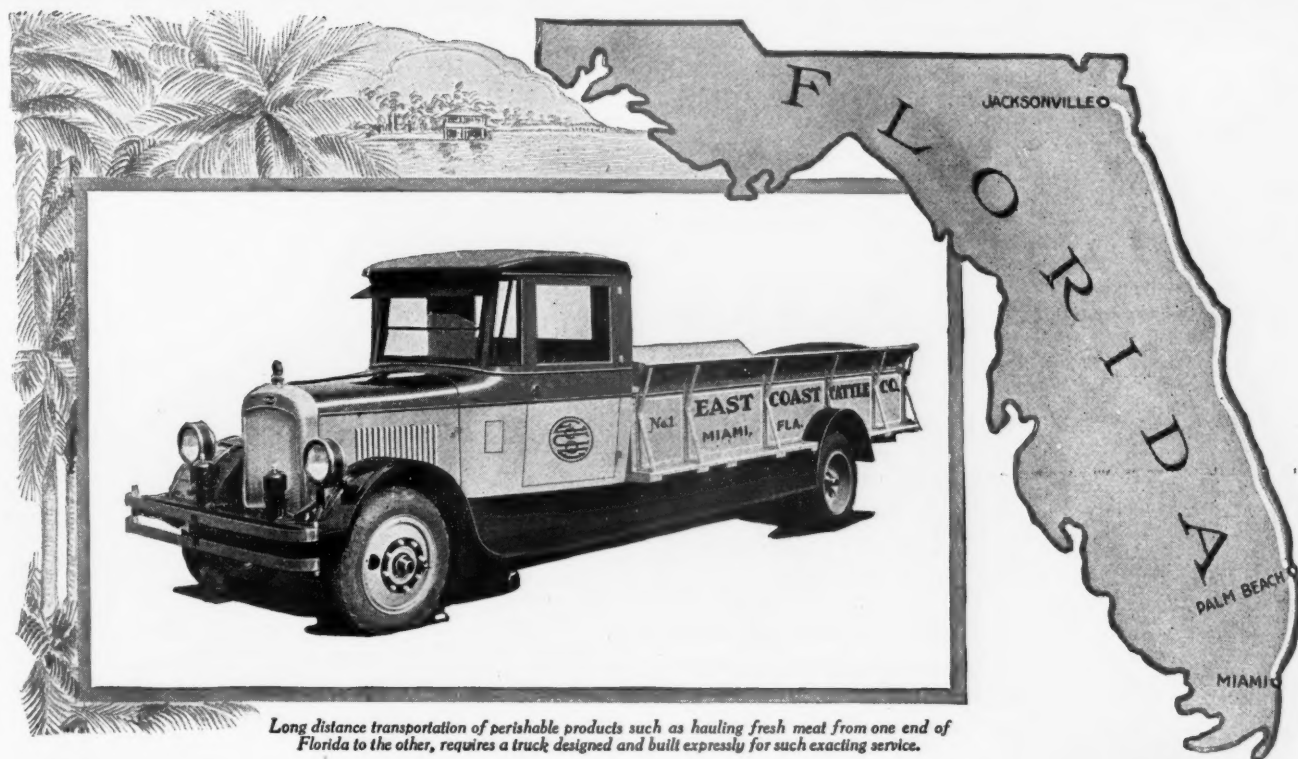
As in the previous models, the device is provided with a Thermostatic coil which automatically positions the needle valve as the engine warms or cools, thus giving the correct mixture so as to obtain the maximum power from every drop of gasoline.

The Blancke Automatic Control attaches to the needle valve of the carburetor taking the place of the regular hand control.

Gasoline mixture is entirely under the control of a Thermostatic coil, so that this mixture is scientifically changed with each degree change in engine temperature.

The General Motors Corp. has obtained a license from A. C. Blancke, who owns the basic patent covering the Thermostatic Control of carburetion. They are now using Thermostatic Control, embodied in a special construction of their own design, as standard equipment for the Cadillac car under Blancke license.

The Control also makes starting easier in cold weather, as it gives a wide open position of the needle valve so the motor starts with little or no choking.



Long distance transportation of perishable products such as hauling fresh meat from one end of Florida to the other, requires a truck designed and built expressly for such exacting service.

florida Gets the First Ruggles "Super-Express"

THE NEW RUGGLES SUPER-EXPRESS has been developed to meet the exacting needs of truck operators who must make swift, trouble-free trips on schedule.

From the great six-cylinder, 75 horsepower Ruggles Motor to the Ruggles full-floating, double reduction Rear Axle, every unit and every part has been built to stand up under the severe demands of continuous high speed operation with heavy load.

Low, long and racy in design, the *Ruggles Super-Express* clings to the road without sway. Perfect balance ensures safety at high speeds. Long 200 inch wheelbase smooths out bumps and brings the load through in good shape without shifting. Low-hung body enables proper weight distribution. Large capacity is provided without top-heavy loading.

The "Super-Express" is but one of the many exclusive sales opportunities dealers will find in the complete line of Ruggles Trucks, Buses and deluxe Motor Coaches. Write for details of sales franchise—it's different!

Ruggles Motor Truck Co., Saginaw, Mich., U. S. A.



BRIEF SPECIFICATIONS MODEL 65 CHASSIS

Motor—Six cylinders. 75 horsepower.

Wheelbase—200 inches.

Rear Axle—Double reduction, full floating.

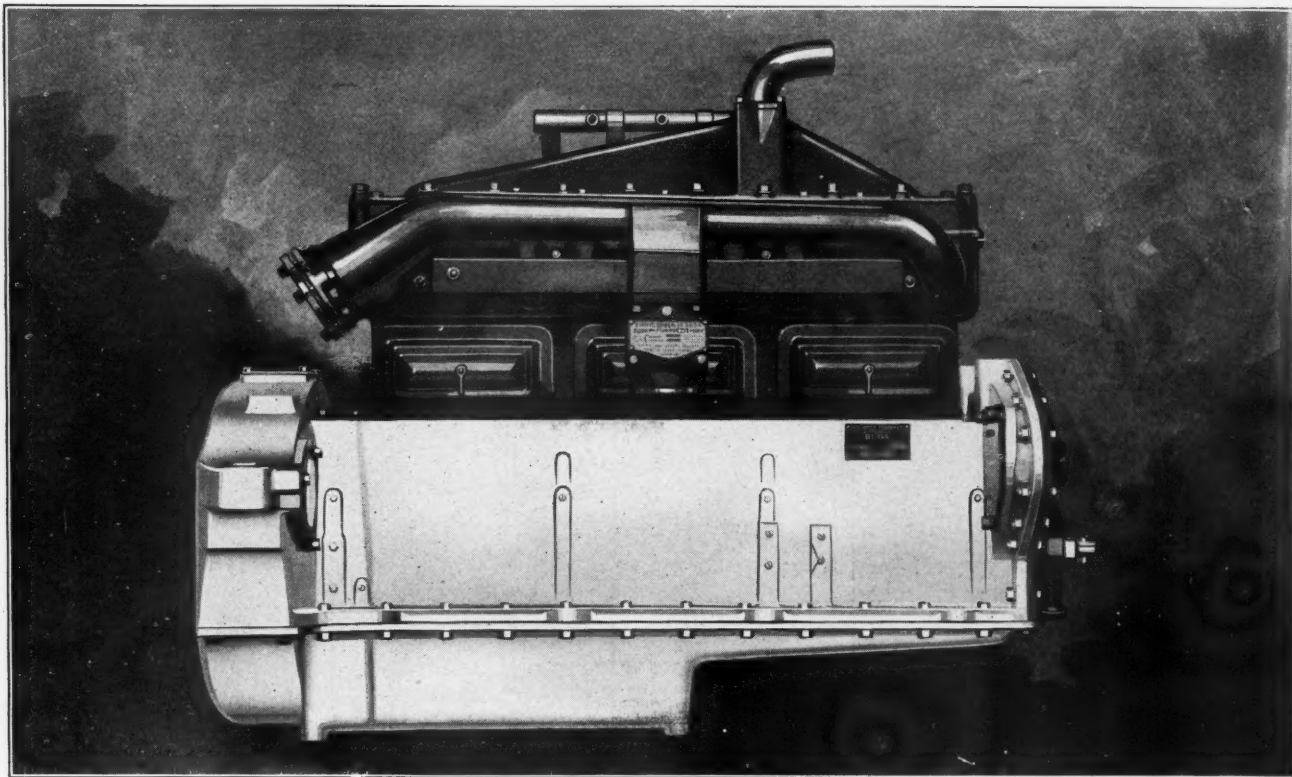
Tires—2 x 6 pneumatic, all around. Dual tires in rear.

Speed—50 miles per hour.

Deluxe Cab—Exceptional driver's comfort. Full leather upholstery throughout. Side ventilators. Adjustable plate glass windows. "T" head handles on doors. All instruments on dash under glass.

RUGGLES

A COMPLETE LINE OF "SIXES" AND "FOURS"



Buda 6 Cylinder Model BUS—4" x 5½"
Buda 6 Cylinder Model GL-6—4½" x 6"

Two engines that are making history in bus transportation

The essentials in an engine for motor coach transportation were incorporated in these engines by Buda engineers after a very careful investigation and analysis of the requirements in this field.

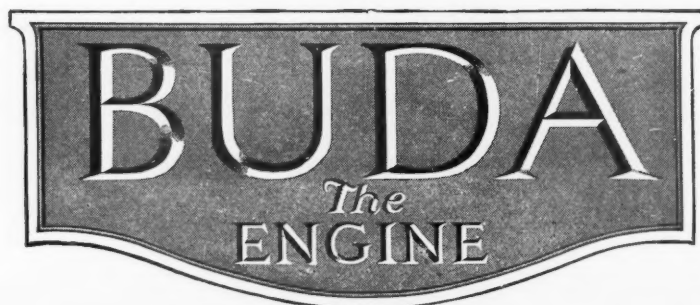
The ease and economy with which these engines have met the demand of this industry has proven the soundness of Buda design and construction. In long distance service the yearly

grind at the rate of 250 to over 400 miles per day is the regular duty of these engines. Schedules are met on time with their uniform vibrationless power flow with an ease that is gratifying.

In one of these two engines you will find the ideal power plant for your motor coach. Both are now in quantity production and available for immediate delivery. Write for detailed specifications.

THE BUDA COMPANY, HARVEY CHICAGO ILLINOIS
ESTABLISHED 1881

Buy only genuine Buda Parts for your Buda engine



Modern Roads

*lift a \$1000 price penalty
off today's truck ~ ~ ~
engineered for today's
road ~ priced to meet
buyers' new demands for a
fine truck at a lower price*

LEHIGH
MOTOR TRUCKS

Low priced transportation does not mean high first costs, ponderous size, excessive weight. . . .

TRUCK buyers are requiring a brand-new deal in the making and pricing of motor trucks.

No longer are they willing to pay a penalty of from \$800 to \$1,100 for excessive truck weight. Ponderous sized giants up to 6,000 lbs. may have been necessary for a two-ton load when mud and muck ruled the road—but not today.

Today's 35,000 miles of good roads demand a truck designed to fit them.

Lehigh has built this truck.

Engineered to Meet Modern Conditions

No traditions hampered Lehigh engineers. No stock of existing dies, jigs, or machines dictated the construction of this unit.

Working with the firm conviction that bulk is no indication of strength, nor size of quality, Lehigh has produced a truck, simple, accessible, well balanced with every part selected to meet modern conditions. Instead of relying on bulk and weight, so costly in operation as well as in first cost, Lehigh engineers have built to eliminate weight, to save tire, gas and

service expense—they have built for the UNDERLOAD as well as the rated load.

Staunchly Dependable

Lehigh inherent strength is a result of the perfect balance and quality of its units.

Low center of gravity makes for greater speed and strength.

Designed from the ground up to overcome road, load, starting and stopping shocks that lead heavy trucks to premature repair.

It is as easy to handle as a passenger car. Conserves driver's energy, so that the last hour of the day is as productive as the first.

A four cylinder two-ton unit weighing 3,270 lbs.

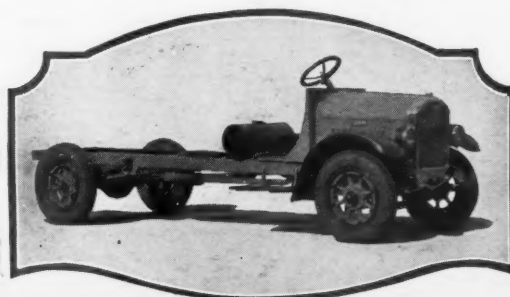
Standard body and cab types to meet all requirements.

Service Everywhere

The day of true economy is dawning. The hour of the modern, light weight, high-quality, well balanced, sensible and economical motor truck is here.

The Lehigh Company
Allentown, Pa.

2-Ton
4-Cylinder
Model



\$1695
F. O. B. Allentown

Predominant Lehigh Features

4-Cylinder-Merchandising Dispatch Model

Capacity—4,000 lbs.

Wheelbase—146 inches.

Pneumatic tires on steel wheels.

4-Cylinder motor, L-head type. Abundant power, speed and flexibility.

Staunch pressed steel frame.

Sturdy, resilient semi-elliptic front and rear springs of chrome vanadium.

Orbit steel radius rods to relieve strain on springs.

Low hung frame provides safety at all speeds.

Remarkably easy steering.

Oversize oil type propeller shaft mounted on self-aligning bearing in center to prevent whipping.

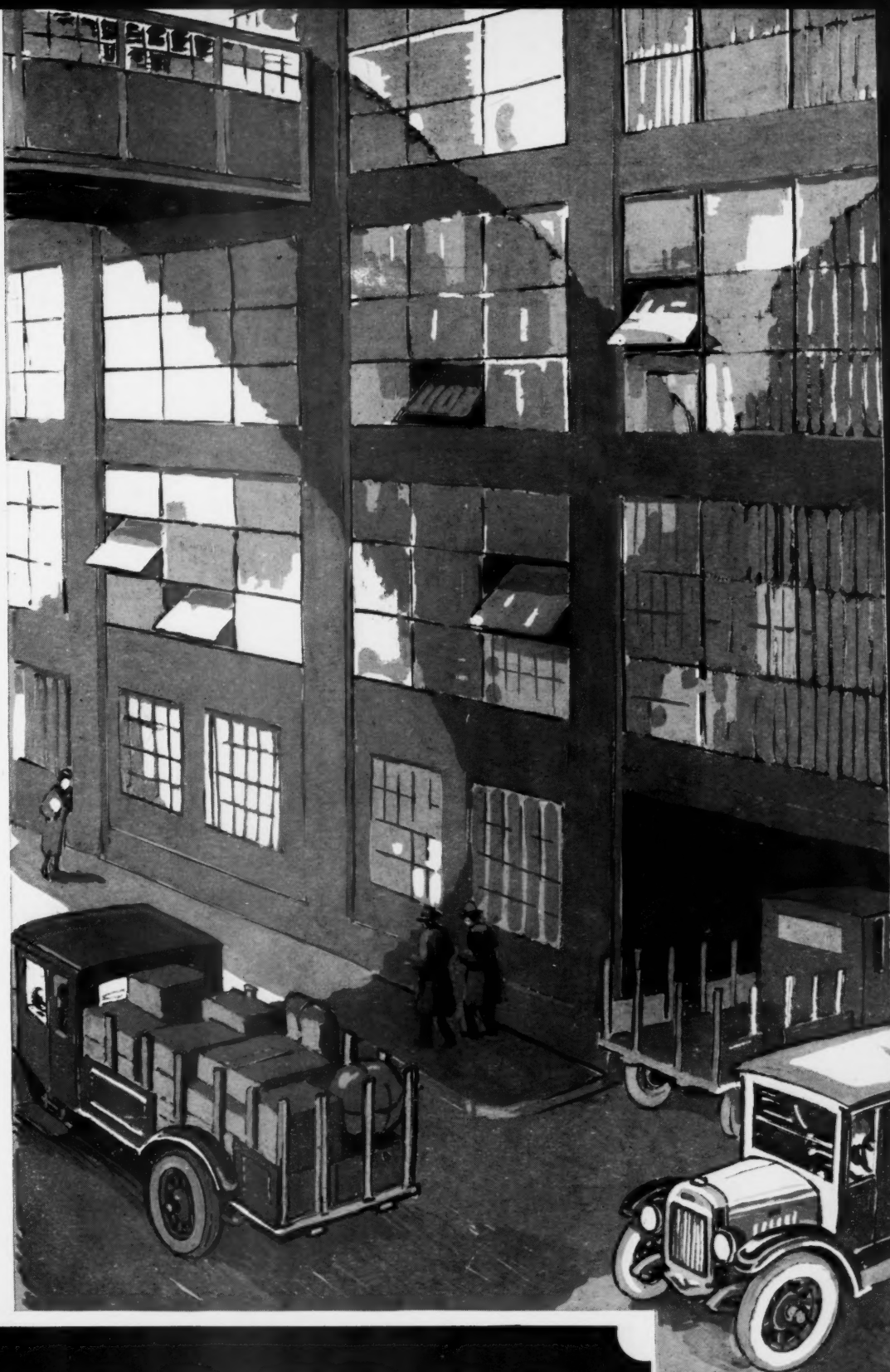
Detachable cylinder head. Differential gear and pinion, battery, transmission, clutch and other parts are readily accessible.

Turning radius—26 feet.

Weight—3,270 lbs.

Many features — electric starter, battery, drum headlights with anti-glare lenses. Tail lights, switch ammeter and electric horn, tool kit, spare rim and grease gun.

Price, \$1695. F. O. B. Allentown, Pa.



LEHIGH

MOTOR TRUCKS

New Engineering New Value New Opportunity

*Read our
franchise
and you
will find*

that the policies are fair and liberal in the matter of truck discounts, parts discounts, return of parts, service policies, sales and advertising co-operation, allotment of trucks, etc.

FOR instance, your territory is yours. No other dealer will be assigned so long as you fulfill your ordinary obligations. You will sell a wanted truck. You will have the sound backing of a strong, well-financed organization.

Your margin will enable you to lay up a reserve for expansion. You are sure of

a large and constantly increasing following of satisfied owners.

You will be able to divorce yourself from trade-in evils.

You will have all any ambitious dealer can ask. . . . Profit. Security. Permanency. *Opportunity!*

Now while you think of it fill in. . . . tear out and mail the reminder coupon below.



The
Lehigh
Company,
Allentown, Pa.

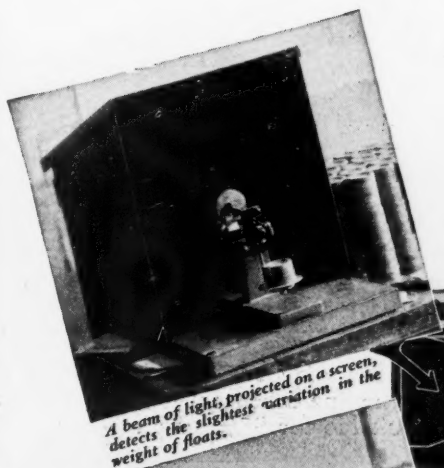
Gentlemen: I am
interested in find-
ing out more about
your sales proposition.
Send along the details.
I understand this will not
obligate me.

Name

Address

ZENITH

Four Reasons for Zenith Supremacy



A beam of light, projected on a screen, detects the slightest variation in the weight of floats.



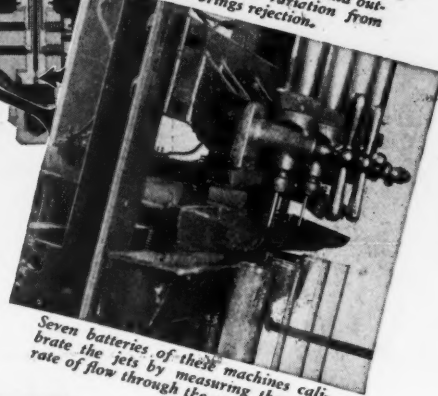
Needle valve points are inspected under powerful microscopes, to detect any flaws hidden from the eye.

ZENITH

CARBURETOR



"Chokes" are gauged inside and outside. The smallest variation from standard brings rejection.



Seven batteries of these machines calibrate the jets by measuring the exact rate of flow through the opening.

Ordinary methods of inspection are not sufficiently delicate to insure exact duplication, in production. Special devices, designed and built by us, insure that all controlling parts of a size are really identical; that when these parts

are assembled, all Zeniths for a given motor will act exactly alike.

That is why results obtained by Zenith experts in factory tests are duplicated by the car owners in actual service.

ZENITH-DETROIT CORPORATION

Manufacturer of

ZENITH CARBURETORS

DETROIT

MICHIGAN

NEW YORK

Branches:
CLEVELAND

CHICAGO

Over 1100 Service Stations

Stewart

MOTOR TRUCKS

A remarkable group of speed trucks in three standard sizes

WHEN actually hundreds of fleets have grown from a single motor truck generally bought on the basis of "you have to prove your claims," it is evidence that the trucks in question have a justified claim to excellence.

For twelve years Stewart Motor Trucks have been filling repeat orders to fleet owners who had purchased an initial unit for trial.

Stewart chassis models have been so standardized, that in spite of the fact that the line consists of but a few numbers, these are suitable for 97% of all truck uses.

In the speed truck range there are three standard sizes, 1-ton, 1½-ton and 2-ton.

Because of their noteworthy performance, these, like all other Stewarts, have well earned the right to be called "remarkable," either singly or as a group.

Stewart speed trucks have the further advantage of being powered with Lycoming Motors.

LYCOMING MANUFACTURING COMPANY

Makers of fine Fours, Sixes and Eights-in-Line

WILLIAMSPORT :: PENNSYLVANIA



LYCOMING

Motors

Years Ahead in Automobile Motor Efficiency

Hundreds of
Stewart fleets
have grown
from a single
Truck



This is the new 6 cylinder Stewart 1½-2 ton

Nothing Of Its Size Can Compare With it From the
Standpoint of Price, Performance, Satisfactory Service

GO OVER the new Stewart six-cylinder speed truck point by point—six cylinder motor, 32 x 6 truck cord tires front and rear, 145 inch wheel base, unusually large brakes, long, easy springs. Transmission, rear end, clutch, front axle—each is an outstanding feature—a remarkable truck at a remarkable price, the best truck value on the American market.

It is dollar for dollar value all the way through. All truck—built by a company which makes nothing but trucks. Easy riding, easy steering—it is designed for long life and low operating expense. It is a truck you will enjoy driving, enjoy owning because of its economy in gasoline, oil, tires, repairs. You cannot realize its comfort until you get behind the wheel and drive it.

Other Capacities:

1	Ton Chassis (4cyl.)	\$1195
1 ¼	Ton Chassis (6cyl.)	\$1295
2	Ton Chassis	\$1890
2 ½-3	Ton Chassis	\$2895
3 ½-4	Ton Chassis	\$3795
25	Passenger Bus Chassis (6cyl.)	\$4600
f.o.b. Buffalo plus tax		

4-cylinder chassis \$1595

6-cylinder chassis \$1695

f. o. b. Buffalo plus tax

The Stewart Franchise is liberal and a money-maker for the dealer—write for details.

Stewart

MOTOR TRUCKS

STEWART MOTOR CORPORATION, BUFFALO, N. Y.
EXPORT BRANCH—Dept. 3, 90 West Street, New York, N. Y. All Codes Used.



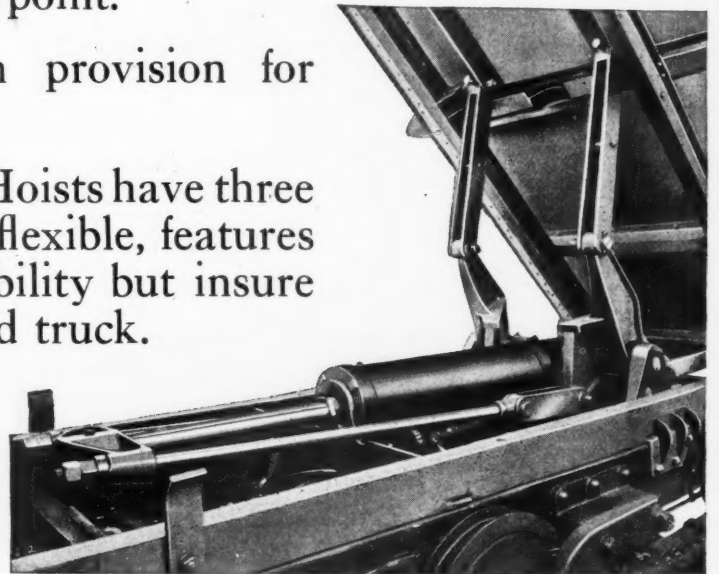
Four White trucks owned by the Revere Transportation Company, St. Louis, Mo., equipped with St. Paul Heavy Duty Underbody Hydraulic Hoists.

The ease with which St. Paul Hydraulic Hoists are manipulated, and the smoothness of operation are outstanding features in their favor from an economical viewpoint.

No other Hoist has built in provision for unequal loading of the body.

St. Paul Underbody Hydraulic Hoists have three point suspension, and are fully flexible, features which assure not only dependability but insure durability, both in the Hoist and truck.

The name "St. Paul" stands for dependability and durability



Close-up view of a Heavy Duty St. Paul Underbody Hydraulic Hoist. Note the rugged construction of the lifting links and levers

HYDRAULIC HOIST MANUFACTURING CO.

FACTORIES at St. Paul, Minnesota

DISTRIBUTORS and SERVICE STATIONS Everywhere

Write for Name and Address of One Nearest You

— St. Paul —

VERTICAL AND UNDERBODY
HYDRAULIC HOISTS



---and you know even the best truck needs service at some time---with Whites you are always sure of quick service, well done, at low cost

A White Truck salesman and a buyer are going through the service station at a White factory branch.

Salesman—The whole thing—men, materials, tools, even the laying out of the building itself and the choice of location—makes it possible to give you *quick service, well done at low cost*. Even the best truck needs service some time.

Buyer—Yes, every salesman brags about his service. But, try and get it! . . . and they rob you on parts.

Salesman—The White Company regards service honestly — just as it does manufacture. Service is part of the business of furnishing dependable transportation. Whites are built as well as a truck can be built and then The White Company stands right behind them, throughout their long life, to see that they are kept rolling. And White service at *low cost* means White parts at *low cost*. White parts are priced exactly as White Trucks are priced—the cost of manufacture, plus a fair profit.

Buyer—This is all right for trucks here in

this territory. But you know I've got to send two to our Memphis plant and one to Seattle.

Salesman—The same sort of service is available. You can send them anywhere you like. White Trucks are at work all over the world and no White Truck is ever far from interested care. With its system of modern, fully equipped branches and its hundreds of dealer establishments, The White Company has spread the boundaries of its factory yard throughout the world.

Buyer—Well, I've had a couple of "orphan" trucks—no parts, no service. Cost me \$30 every day one of them had to be laid up.

Salesman—Some of those old Whites I told you about that have been running 200,000 and 300,000 miles are eight, nine and ten years old. Their needs are still provided for. If they weren't right out there hauling their *pay load* every day you know their owners wouldn't keep them year after year.

Buyer—True enough. When they stop rolling they stop earning. Then they begin to cost you money.

Salesman—And that leads right back to the bedrock of this whole transportation business. More White Trucks are in service today than trucks of any other high-grade make because Whites have always given their owners the *most money-earning miles*. The White Company couldn't be the leader in its industry after a quarter of a century if it sold just trucks. It has always sold continuous, sustained, economical transportation.

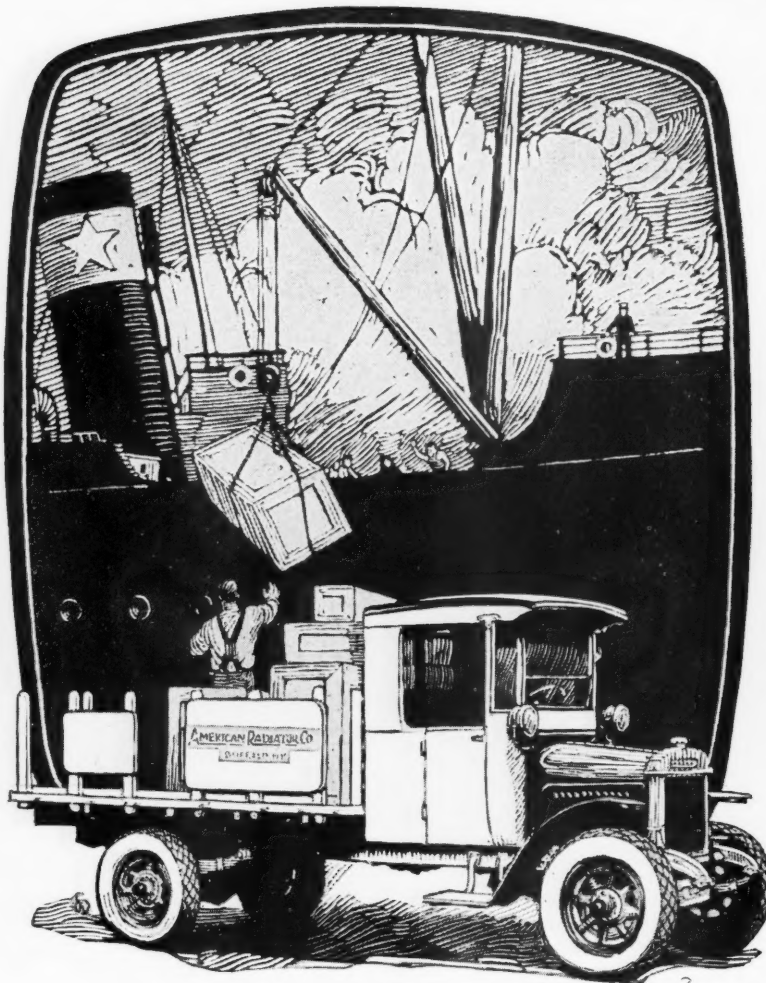
* * * * *

A White salesman is ready to show you how White Trucks can serve you. Let him show you a White Service Station. Let him show you how a White Truck can earn money for you. Terms may be arranged. There is a White Truck model to meet every transportation need. Truck chassis, \$2,150 to \$4,500. Bus chassis, \$4,950—f. o. b. Cleveland.



THE WHITE COMPANY
CLEVELAND

WHITE TRUCKS



ESTABLISHED 1903

THE ATTERBURY HIGHWAY EXPRESS

Its Popularity Didn't "Just Happen"

A year ago the Atterbury Highway Express was presented.

It "took" immediately as a big advance in economical transportation.

It offered two tons payload capacity with better than thirty miles an hour road speed.

It was built heavy to stand that kind of a job.

The ideas of hundreds of truck owners and dealers went into it. That's how it got its

name—The Speed Truck the Nation's Business Has Waited For.

A year's use has proved why its popularity didn't "just happen."

It's built to carry more, go faster and last longer than any other truck you know.

Here are a few specifications, but you'll find it good business to write for the whole story.

[Chassis weight 4750 lbs., speed 35 miles an hour, Buda four-cylinder 4" x 5¼" motor, Bosch magneto, Brown Lipe clutch and transmission, Timken worm drive axle, wheelbase 150" and 162", Standard Equipment enclosed cab, electric head and tail lights, electric horn, Bosch generator, Willard Battery, Alemite lubrication.]

Also 2½-3, 3½-5 and 5-7 ton models.

ATTERBURY MOTOR CAR CO.

Members of Motor Truck Industries, Inc.

Elmwood Ave. at Hertel

Buffalo, N. Y.

Atterbury Highway Express

THE SPEED TRUCK THE NATION'S BUSINESS HAS WAITED FOR



You want Highland Sliding Doors for Your Cab

SLIDING doors, as used in the Highland Cab, give you a safety and convenience you can get in no other cab.

You have seen many hinged door cabs tied open in hot weather — and making a spread about 9 feet wide that invites frequent traffic accidents. You have seen these doors broken and jammed, and loose and rattling. When open they cover up all the signs and lettering in the cab body.

Highland Cabs have changed all that. The windows are separate from the doors and both slide back into the side of the cab. They hide nothing. They do not protrude, and cannot hit anything.

There are no center posts that obstruct the driver's vision.

Highland Cabs are the safest, most comfortable and convenient cabs that you can possibly buy.

You want a sliding door cab. And when you have seen the Highland and the ease with which it may be adjusted to the open, closed or partly closed position you will take no other.

You can get a Highland Cab on any new truck. Just specify it when you buy. Any manufacturer or truck dealer can get it for you. If you want Highland cabs for an old truck write us for the name of our nearest distributor.

THE HIGHLAND BODY MFG. COMPANY

403 Elmwood Place, Cincinnati, Ohio

HIGHLAND *Cabs*

Performance on Steep Grades Four 40 x 8 Tractor Tires on the rear of our Packard Truck Tires have gone 7,500 miles and look good for double this mileage Loads we carry are very heavy In going up and down steep grades Goodrich Tractors have demonstrated their wonderful Tractor qualities Bogota Riper & Board Co., Bogota, N. J.



Veterans in Trucking

Goodrich Cushion Truck Tires (Tractor Type) have won a unique position in trucking They are the outstanding tires for rear wheel equipment They are the tires for long hauls and exacting service, and they have proved it on the working line You may read their records in the words of men who have profited by them The Goodrich Dealer will show you what users know Goodrich Tractors mean to the bank account of a truck operator.

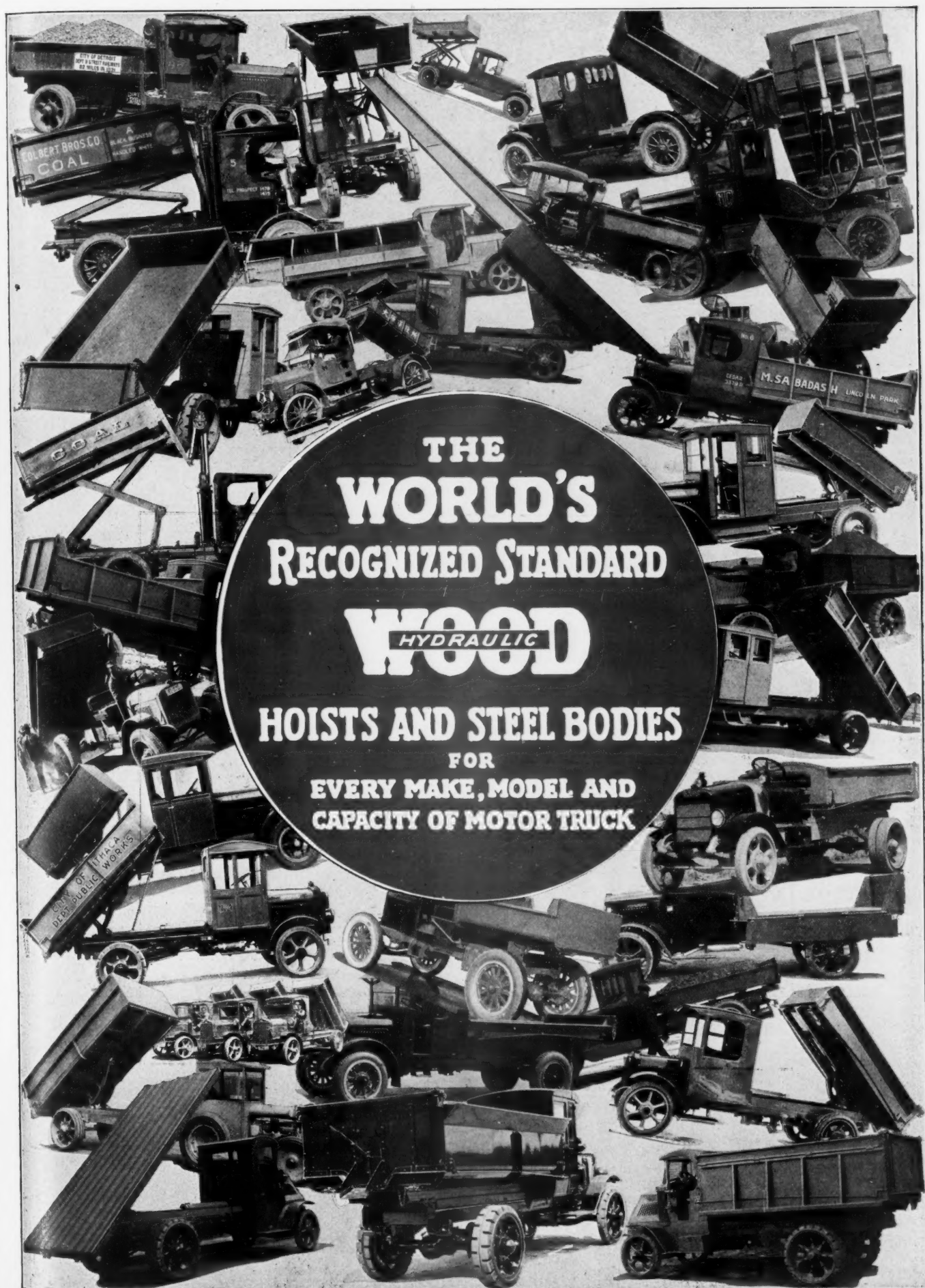
[To round out economical and efficient service in the operation of trucks and buses, Goodrich provides the famous De Luxe solid smooth type, Goodrich Semi-Pneumatics and Goodrich Silvertown Heavy Duty Cords.]

THE B. F. GOODRICH RUBBER COMPANY, Akron, Ohio
In Canada: The B. F. Goodrich Rubber Company, Ltd., Toronto

"Best in the
Long Run"


Goodrich

De Luxe TRACTORS



**THE
WORLD'S
RECOGNIZED STANDARD
WOOD
HYDRAULIC
HOISTS AND STEEL BODIES
FOR
EVERY MAKE, MODEL AND
CAPACITY OF MOTOR TRUCK**

The background of the advertisement is a dense collage of numerous vintage motor trucks and dump trucks. Many of the trucks have their hydraulic dump beds raised at various angles, demonstrating the product being advertised. Some of the trucks have text on their sides, such as "CITY OF DETROIT", "COLBERT BROS. CO. COAL", "M. SA BADAS", and "CITY OF TULSA". The trucks are arranged in a circular pattern around the central text, which is enclosed in a dark, circular frame.



Prest-O-Lite

THE OLDEST SERVICE TO MOTORISTS

The Cleveland Coca-Cola Bottling Co. writes

"Our entire fleet is now Prest-O-Lite equipped, producing, we believe, the most economical, satisfactory lighting system for commercial vehicle work."

This testimony reflects the attitude of fleet operators throughout the country. Wherever Prest-O-Lite Gas has been used, it has firmly established itself as the most dependable light for trucks.

Prest-O-Lite Gas equipment is economical to install and operate. Its absolute simplicity reduces up-keep to the minimum. It outlasts the truck itself. Neither rough roads nor rough weather can dim its flood of mellow, penetrating light.

Legal everywhere.

When Prest-O-Lite equipped, your trucks are ready for night work whenever needed. This extra earning power increases the returns on your investment and reduces ton-mile costs. That's

why Prest-O-Lite Gas is standard equipment on many of the finest fleets.

Your trucks need dependable lighting equipment to carry them safely and economically through the early darkness of shorter days.

Thirty-six big gas-producing plants serve thousands of Prest-O-Lite Exchange Stations located all over the country. You can always get a full tank for an empty one by paying a small amount for the gas only.

As manufacturers of storage batteries for lighting trucks, as well as Prest-O-Lite Gas, we are in a position to tell you the lighting equipment that has proved most satisfactory in various types of service.

THE PREST-O-LITE CO., INC.
INDIANAPOLIS, IND.

New York San Francisco

In Canada: Prest-O-Lite Company of Canada, Ltd.
Toronto, Ontario

Why let darkness eat into your truck profits?

IF YOUR trucks are idle after dark or just creeping blindly along the roads, because of inadequate lights, you are losing money.

An ever-increasing number of America's leading fleet operators are cutting down ton-mile costs and handling more business, because they have found that Prest-O-Lite Gas overcomes all the difficulties of night driving at normal daylight speed.

Their trucks travel fast with safety, because Prest-O-Lite's penetrating, mellow, dependable light makes clear the road ahead.

Install Prest-O-Lite Gas and take advantage of the additional profits and lower ton-mile costs that are waiting for you during the hours of darkness.

Keep up a daylight average after dark.


Prest-O-Lite Gas has been thoroughly tried and tested under all conditions of road and weather by thousands of fleet operators. It has more than made good.

These operators use Prest-O-Lite Gas for the same reason that you should use it—for its ease of installation, its convenience, its absolute dependability, its economy and its ability to pay real dividends.

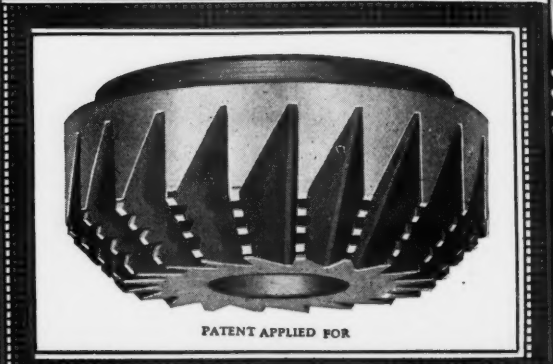
To truck dealers

Your customers look to you for equipment advice. Guarantee them absolute lighting satisfaction by selling them Prest-O-Lite Gas. Its faithful performance makes friends for you. By keeping Prest-O-Lite Gas in stock, you build up a profitable business in tank exchanges. Write for our dealer proposition.



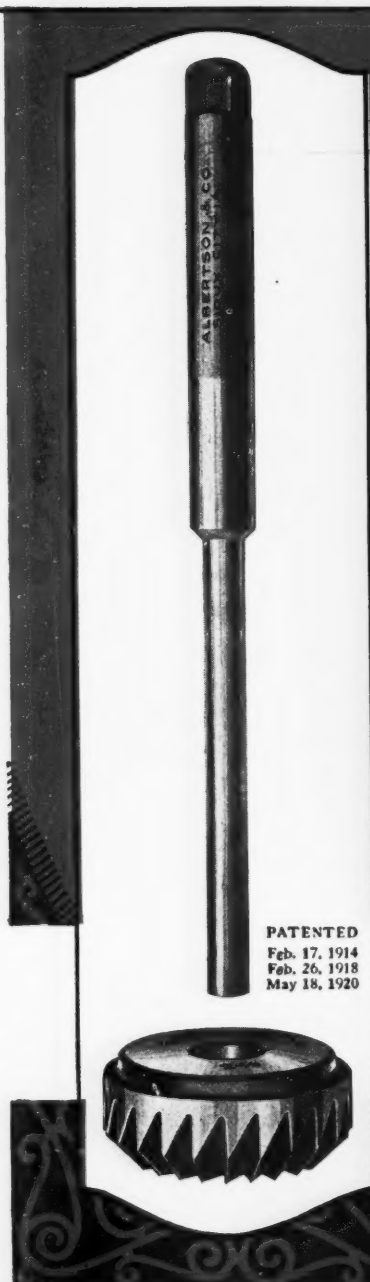


Comes in 30, 45, 50 and 60° angles.
Used with regular Sioux pilot stems.



PATENT APPLIED FOR

SIOUX ROUGHING REAMER



removes hard, crystallized carbon deposits with just a few turns. Note, in the illustration above, the tough sharp "teeth", so arranged that one cut overlaps the other, thus leaving no ridges. After the crystallized surface is entirely removed, finish up with regular Sioux Valve Seat Reamer.

Use a *Sioux Valve Seat Reamer* for reaming out pits, carbon deposits and other irregularities from the valve seats before lapping in the valves. A few turns cuts a smooth clean face at the proper angle—thus saving hours of work on valve grinding jobs and making it easy to get a good compression-tight job.

Made in all sizes—in any degree—30°, 45°, 50°, 60°, and 15° and 75° for narrowing valve seats.

Sioux Pilot Stems are accurately ground to fit perfectly. T Handle Extension Wrenches used in connection with Sioux Pilot Stems only. Sizes, 3 inch, 6 inch and 12 inch.

Please Note! Sioux Reamers are made to have plenty of cutting clearance, thus insuring long usefulness without resharpening. If reamer chatters, due to its cutting clearance, insert a piece of Kraft or wrapping paper on pilot stem between reamer and valve seat. This is only necessary when reamers are sharp.

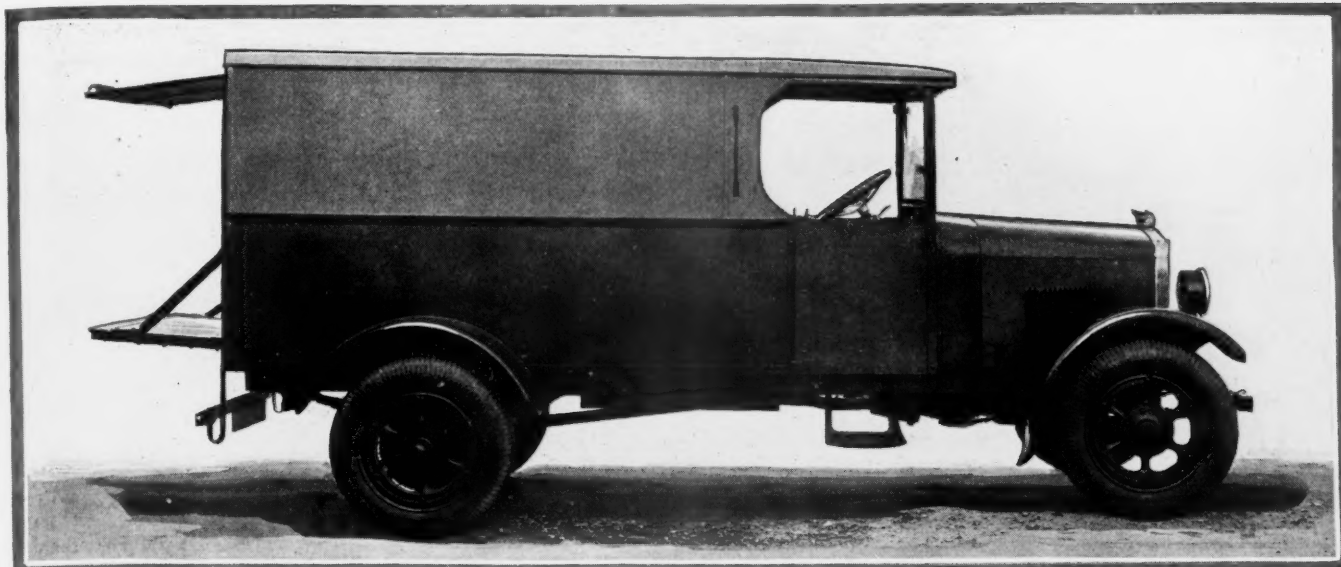
YOUR JOBBER SELLS THEM

SIOUX VALVE SEAT REAMER AND PILOT STEM

ALBERTSON & CO.,
Sioux City, Iowa



PATENTED
Feb. 17, 1914
Feb. 26, 1918
May 18, 1920



THE SIX-CYLINDER COMMERCE "DISTRIBUTOR"

CUSTOMERS WAITING FOR THEM

No dealer can afford to be without a fast, dependable six-cylinder truck to fill the tremendous demand for a delivery unit of this kind.

There are more one-ton trucks sold in the United States than all other sizes combined. You can attain a *volume of sales* with a good one-ton model.

Owners are demanding more than just an ordinary truck made small. They want a small truck built especially to meet their requirements of speed, flexibility, power, comfort, and above all, *endurance and dependability*.

Only by the combination of the finest truck units and a six-cylinder motor can this object be attained.

Get in line to supply the needs of the biggest market. Sell a truck which is low-priced, yet **SURE TO ENDURE**. Write for particulars of the Commerce Franchise.

Read the following specifications carefully—compare them, study them, then write to Commerce.

Cast Aluminum four-piece Radiator shell; Six-cylinder, 48 horsepower, Continental motor; Bosch Magneto ignition; Bosch starting and lighting; Ross easy-steer cam and lever steering gear; Plate clutch—extra heavy transmission with ball bearings throughout; Oil-tight universal joints; Clark spiral bevel rear axle; Smith Steel Wheels; 30 x 5 cord tires all around; Heavy heat-treated frame.

Write now for details. There is still some territory available for the responsible dealer.

PRICE
CHASSIS
\$1395
F. O. B. Ypsilanti

Commerce

COMMERCE MOTOR TRUCK COMPANY

YPSILANTI, MICHIGAN

Export Dept.: 132 Nassau St., New York City

Cable: Comerstrux

MODEL SUPER 11 1½ TON

Continental S-4 motor, 4¼" bore x 4½" stroke. Spiral bevel gear rear axle. Radius rods. Wheelbase, 142 inches. Long wheelbase, 160 inches. Pneumatic cords, 34" x 5" front and 36" x 6" rear.

MODEL SUPER 14

Continental S-4 motor. Timken worm drive. Standard wheelbase, 146 inches. Long wheelbase, 160 inches. Equipped with either solid or pneumatic tires.

MODEL 25 2½ TON

Continental K-4 motor, 4⅞" bore x 5¼" stroke. Timken worm drive. Standard wheelbase, 156 inches, special wheelbase, 144 inches or 176 inches. Solids or pneumatics.

POWERMATIC

Automatic power unloading truck, for lumber, building supplies, etc. Built on the model 25. Sold only as a completely equipped truck, including unloading mechanism and body.

What a Jobber Heard from His Trade



THIS jobber has sold many Thompson Valves—in fact, every customer on his books has bought them. We thought that perhaps our sales talk might not be exactly the same as the *reason why his trade bought*. So we asked him.

"You can sum it up in three words," said he, "No come-back." Then he added, "One job you do twice eats up all the profit on five or six others—get me?"

We would not claim that there is never a come-back on Thompson Valves. Man never made anything yet that couldn't be destroyed by bad handling. But we've never yet found the limit to the rough treatment they *will* stand. They've gone through tests that no one ever supposed any valve could survive at all—let alone coming out in first class working condition as the Thompson Valves did.

So why take a chance by grinding

old worn-out valves or putting in cheap ones? The average truck owner objects to any price he doesn't understand, but he is willing to pay for good service *if you tell him why it's better for him*.

And you'd rather see him come back occasionally with a smile, than often with a kick!

When ordering from your jobber specify Thompson Silcrome Valves by name.

THOMPSON PRODUCTS, INC., CLEVELAND

Also manufacturers of King Bolts, Tie-Rod Bolts, Spring Bolts, Bushings, Tappets and Starting Cranks

EXPORT DEPARTMENT: 130 West 42nd St., New York, U. S. A.

Cable Address: "THOMPRO—NEW YORK"

Thompson Silcrome Valves





“R.H.M.C. New York, Broadcasting”

Good merchandise, at popular prices—plus SERVICE to the customer... To the most exacting public in the world, MACY, New York, is the code-word for all three...

“We wish you to know we have received *entire satisfaction* from our Overland Spad delivery cars,” writes Mr. H. G. Vonk, Supply Department Superintendent, R. H. Macy & Company, “They have been both *dependable* and *economical*”...

“Entire satisfaction”—“Dependable”—“Economical”—this is the complete Spad story boiled down by a busy operator to a very few meaningful words. And this is the record of these smart-looking, 100%-efficient delivery cars wherever you find them in commission.

Is *your* delivery service as snappy, as sure, as satisfactory as to cost as you would like to have it? Get in touch with your local Overland dealer. He can give you the right prescription.

Willys-Overland, Inc., Toledo, Ohio • Willys-Overland Sales Co. Ltd., Toronto, Canada

SPEED POWER AND DURABILITY

[[Write us for the “Cost of Operation Data Book”. Tells you how to keep accurate figures on your operating costs.]]



1 out of 8 cars - are like this

A WHILE AGO the New York police brake inspection squad arrested one motorist out of every eight cars examined for defective brakes.

Considering the number of cars in the country as a whole, this means that there are over two million cars on the road to-day with defective brakes. The next page tells you several ways to get these delinquent prospects into your shop for brake re-lining.

Will their bad brakes stop—

at your garage for re-lining?

SINCE one car out of every eight needs re-lining, you ought to get a re-lining job from one car out of every eight that you come into contact with. And you can—if you go after this business.

First, you should have complete, up-to-date machine equipment for re-lining brakes the modern way.

Then you must let motorists know that you are prepared to re-line their brakes—in a short time—at a fair price—with a good lining. You should have signs, counter displays and booklets around your shop carrying this information.

Send brake re-lining circulars to your prospects and enclose leaflets with your bills.

Advertise in your local newspapers.

Johns-Manville will supply you with all these printed helps, ready to use—including newspaper cuts. These are business-getters—every one.

Most important!

When you once get a prospect thinking about having his brakes re-lined, one of the best arguments you can use to clinch the business is the fact that you re-line with Johns-Manville Asbestos.

Your prospect knows that "Johns-Manville" means "ASBESTOS". He knows that the safety of his car depends on the quality of his brake lining.

A book you need

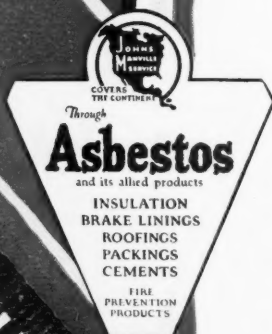
"Dollars and Sense in Brake Lining" is the most complete book on getting brake lining business ever written. It has been prepared for your use and will be sent free on request.

JOHNS-MANVILLE

JOHNS-MANVILLE Inc., 292 Madison Ave. at 41st St., New York City
Branches in 63 Large Cities

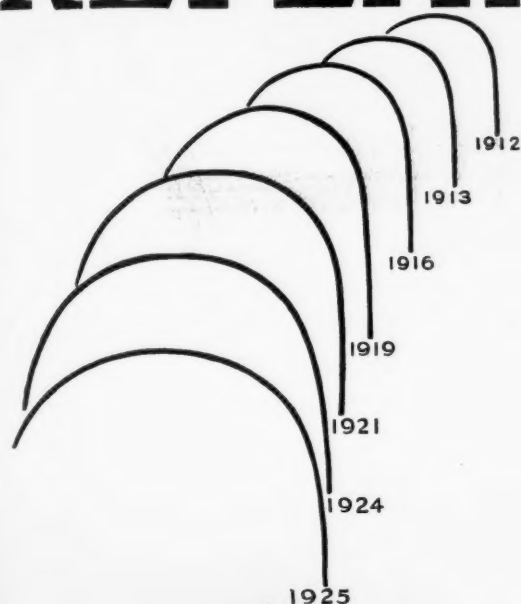
For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto, Can.

ASBESTOS BRAKE LINING CLUTCH FACINGS, PACKINGS, Etc.



GARFORD

REPEAT BUSINESS *thru 13 years!*



The latest purchase by H.C. Bohack Co.

—is a sure sign of the faith and confidence that H. C. Bohack Company of Brooklyn, have in the Garford product.

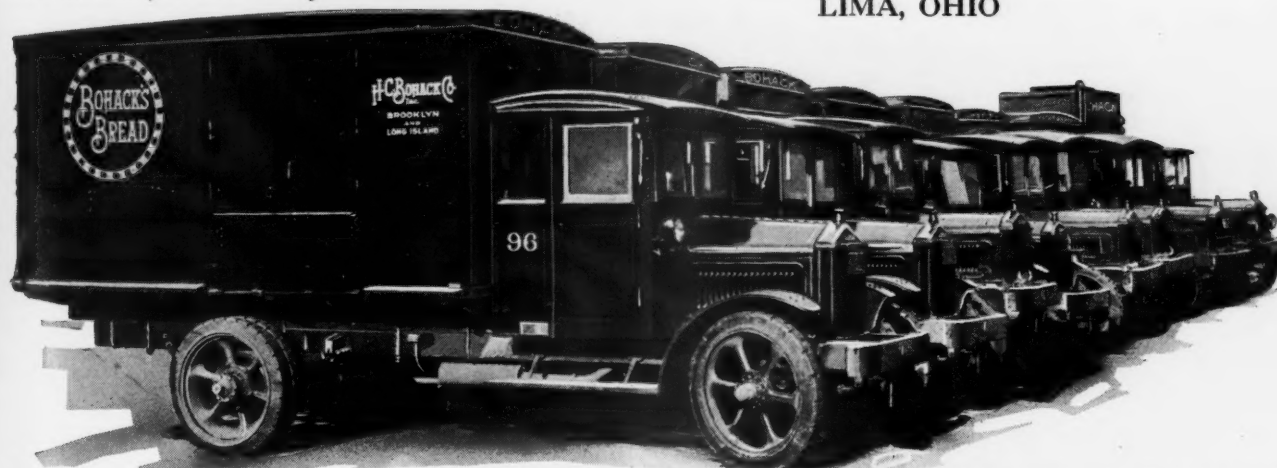
Hundreds of Garford fleets throughout the country have grown from a single Garford. For many years Garford has established a record in furnishing fleet users with equipment that exactly meets their transportation requirements.

Through this ability repeat business has resulted. The Garford Franchise is daily becoming more and more valuable to Merchandisers of Motor Transportation units.

Garford trucks are money makers for both the dealer and user.

Member Motor Truck Industries, Inc.

LIMA, OHIO



THE SERVICE RENDERED FOR H. C. BOHACK CO. BY GARFORDS PURCHASED IN 1912 BROUGHT REPEAT BUSINESS AS SHOWN IN THIS FLEET

A **GRAHAM BROTHERS** **Truck Chassis** *for \$995!*

This exceptional new price of the 1-ton chassis is the result of economies of mass production—economies passed directly on to the buyer.

Graham Brothers now produce in *larger* quantities than any other exclusive manufacturer of motor trucks.

1-ton chassis, \$995—1½-ton chassis, \$1280, F. O. B. Detroit

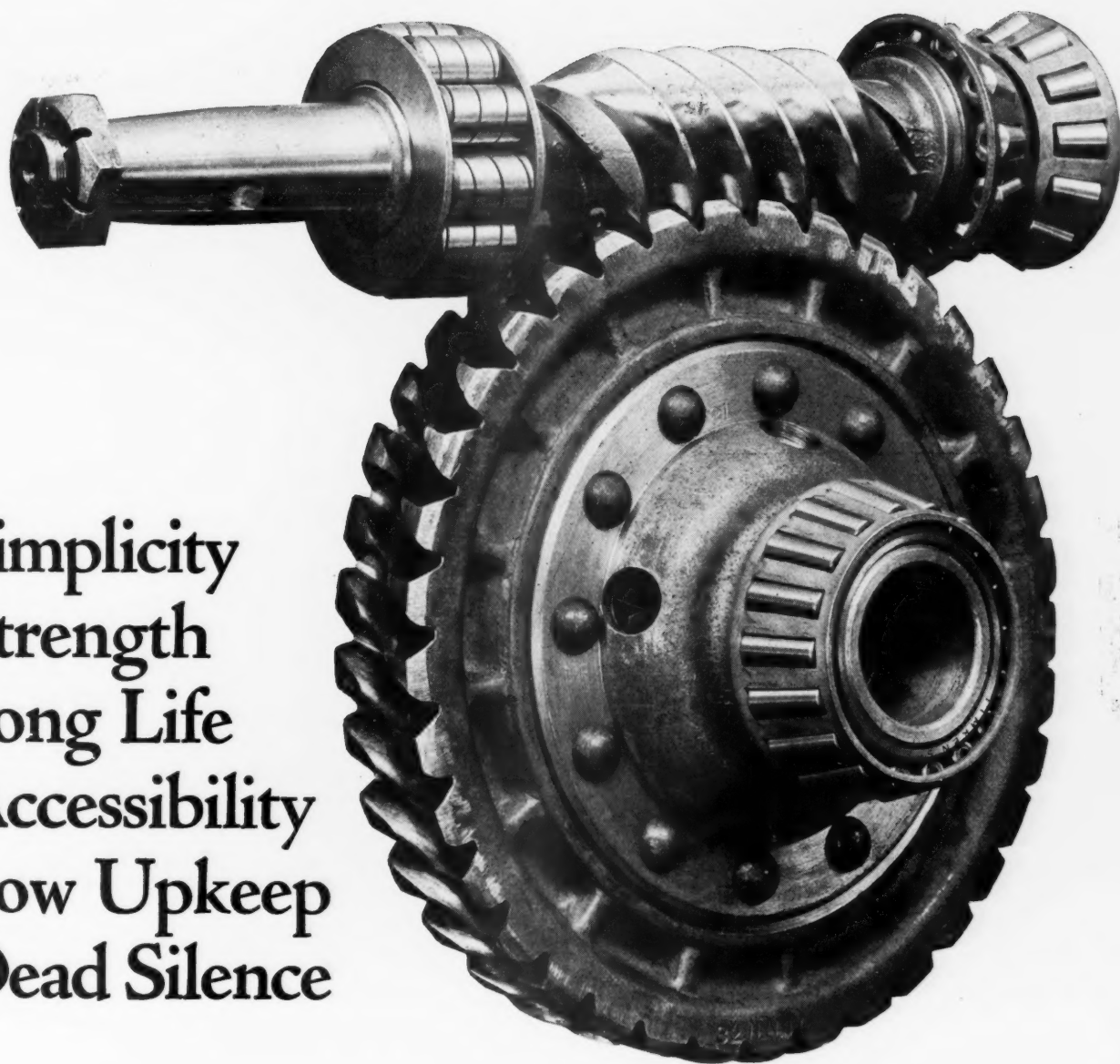
GRAHAM BROTHERS

Evansville — **DETROIT** — Stockton
A DIVISION OF DODGE BROTHERS, INC.
GRAHAM BROTHERS (CANADA) LIMITED—TORONTO, ONTARIO

GRAHAM BROTHERS **TRUCKS**

*SOLD BY DODGE BROTHERS
DEALERS EVERYWHERE*

TIMKEN

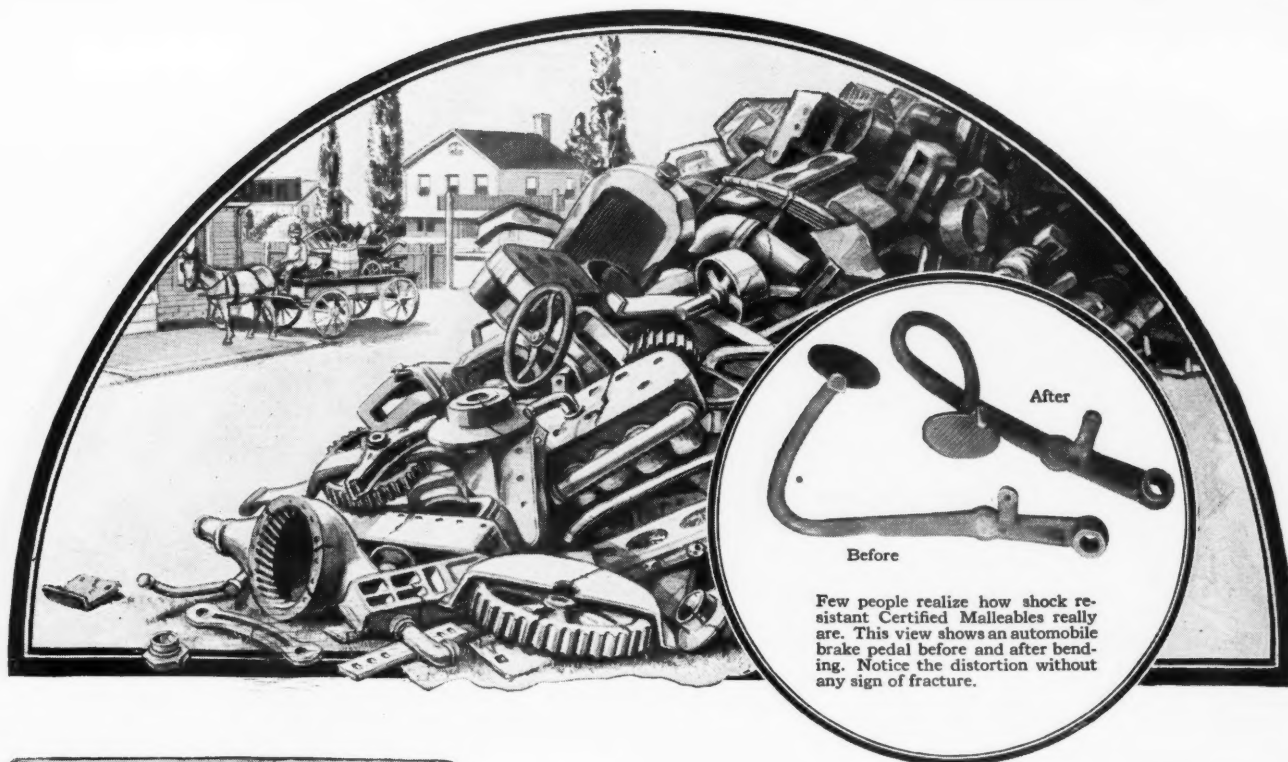


Simplicity
Strength
Long Life
Accessibility
Low Upkeep
Dead Silence



THE TIMKEN-DETROIT AXLE CO., DETROIT, MICH.

AXLES



Few people realize how shock resistant Certified Malleables really are. This view shows an automobile brake pedal before and after bending. Notice the distortion without any sign of fracture.

**Certificate Holders for the Quarter
Ending June 30, 1925**

Albany Malleable Iron Co.	Voorheesville, N. Y.
Albion Malleable Iron Co.	Albion, Mich.
American Chain Co.	Bridgeport, Conn.
American Malleable Castings Co.	Marion, O.
American Malleable Co.	Lancaster, N. Y.
Badger Malleable & Mfg. Co.	South Milwaukee, Wis.
Baltimore Malleable Iron & Steel Casting Co.	Baltimore, Md.
Belle City Malleable Iron Co.	Racine, Wis.
Chain Belt Co.	Milwaukee, Wis.
Chicago Malleable Castings Co.	West Pullman, Chicago, Ill.
Columbia Malleable Castings Co.	Columbus, Pa.
Columbus Malleable Iron Co., The	Columbus, O.
Danville Malleable Iron Co.	Danville, Ill.
Dayton Malleable Iron Co.	Dayton, O., Ironton, O., and Canton, O.
Decatur Malleable Iron Co.	Decatur, Ill.
Devlin Mfg. Co., Thomas	Philadelphia, Pa.
Eastern Malleable Iron Co., The	Naugatuck Malleable Iron Works, Naugatuck, Conn.; Troy Malleable Iron Works, Troy, N. Y.; Wilmington Malleable Iron Works, Wilmington, Del.; Vulcan Iron Works, New Britain, Conn.
Erie Malleable Iron Co.	Erie, Pa.
Federal Malleable Co.	West Allis, Wis.
Fort Pitt Malleable Iron Co.	Pittsburgh, Pa.
Fraser & Jones Co.	Syracuse, N. Y.
General Electric Co.	Erie, Pa.
Glensay Malleable Corporation	Waukegan, Wis.
Illinois Malleable Iron Co.	Chicago, Ill.
Iowa Malleable Iron Co.	Fairfield, Ia.
Kalamazoo Malleable Iron Co.	Kalamazoo, Mich.
Lacoma Car Co.	Lacoma, N. H.
Lakeside Malleable Castings Co.	Racine, Wis.
Link-Belt Co.	Indianapolis, Ind.
Marion Malleable Iron Works	Marion, Ind.
Moline Malleable Iron Co.	St. Charles, Ill.
National Malleable & Steel Castings Co.	Cleveland, O., Chicago, Ill., Indianapolis, Ind., Toledo, O., & St. Louis, Ill.
Northern Malleable Iron Co.	St. Paul, Minn.
Northwestern Malleable Iron Co.	Milwaukee, Wis.
Peoria Malleable Castings Co.	Peoria, Ill.
Pittsburgh Malleable Iron Co.	Pittsburgh, Pa.
Rhode Island Malleable Iron Works	Hillsgrove, R. I.
Rockford Malleable Iron Works	Rockford, Ill.
Ross-Mechan Foundries, The	Chattanooga, Tenn.
St. Louis Malleable Casting Co.	St. Louis, Mo.
Saginaw Malleable Iron Co.	Saginaw, Mich.
Standard Malleable Castings Co.	Terre Haute, Ind.
Stowell Co., The	South Milwaukee, Wis.
Superior Steel Castings Co.	Benton Harbor, Mich.
Symington Co., The	Rochester, N. Y.
Terre Haute Malleable & Mfg. Co.	Terre Haute, Ind.
Trenton Malleable Iron Co., The	Trenton, N. J.
Union Malleable Iron Co., The	E. Moline, Ill.
Vermilion Malleable Iron Co.	Hoopeston, Ill.
Wagner Malleable Castings Co.	Hammond, Ind., and Beloit, Wis.
Warren Tool & Forge Co.	Warren, O.
Webster Mfg. Co., The	Chicago, Ill.
Wisconsin Malleable Iron Co.	Milwaukee, Wis.
York Mfg. Co.	York, Pa.
Zanesville Malleable Co.	Zanesville, O.

Reduce the Nation's Scrap Pile By Using Certified Malleable Iron

EVERY piece of metal in this scrap pile could tell a story of breakage, disappointment and expensive delay. Disrupted train schedules, costly wrecks, expensive harvest delays, dangerous breakdowns of trucks and motor cars, and failures of vital parts in all classes of machinery represent an annual waste of time and money that runs into many millions of dollars.

Most of this waste could be prevented by the more liberal use of Certified Malleable Iron which is strong enough and durable enough to resist breakage and insure absolute safety.

Certified Malleable Iron will stand more shock and abuse without breakage than any other ferrous material. Therefore, it should be used wherever parts must withstand shock and vibration, where breakage must be eliminated and where time saving is essential.

Certified Malleable Iron is the product of those plants who receive a quarterly certificate of merit from the consulting engineer of the American Malleable Castings Association; certifying that their product has met his exacting physical tests and that their plant practice, as shown by rigid inspection, insures the production of uniform malleables of the highest quality and integrity.

AMERICAN MALLEABLE CASTINGS ASSOCIATION
UNION TRUST BUILDING CLEVELAND, OHIO



CERTIFIED-MALLEABLE CASTINGS

United



A Carload of Uniteds Ready for Shipment to Ceylon

And abroad as well—

United trucks are fast becoming recognized for their economy of operation and absolute dependability.

Today there are Uniteds faithfully performing their tasks in Japan, China, Germany, England, Australia, India and many of the South American countries.

The same qualities that have made the United so popular in foreign lands are available to users everywhere.

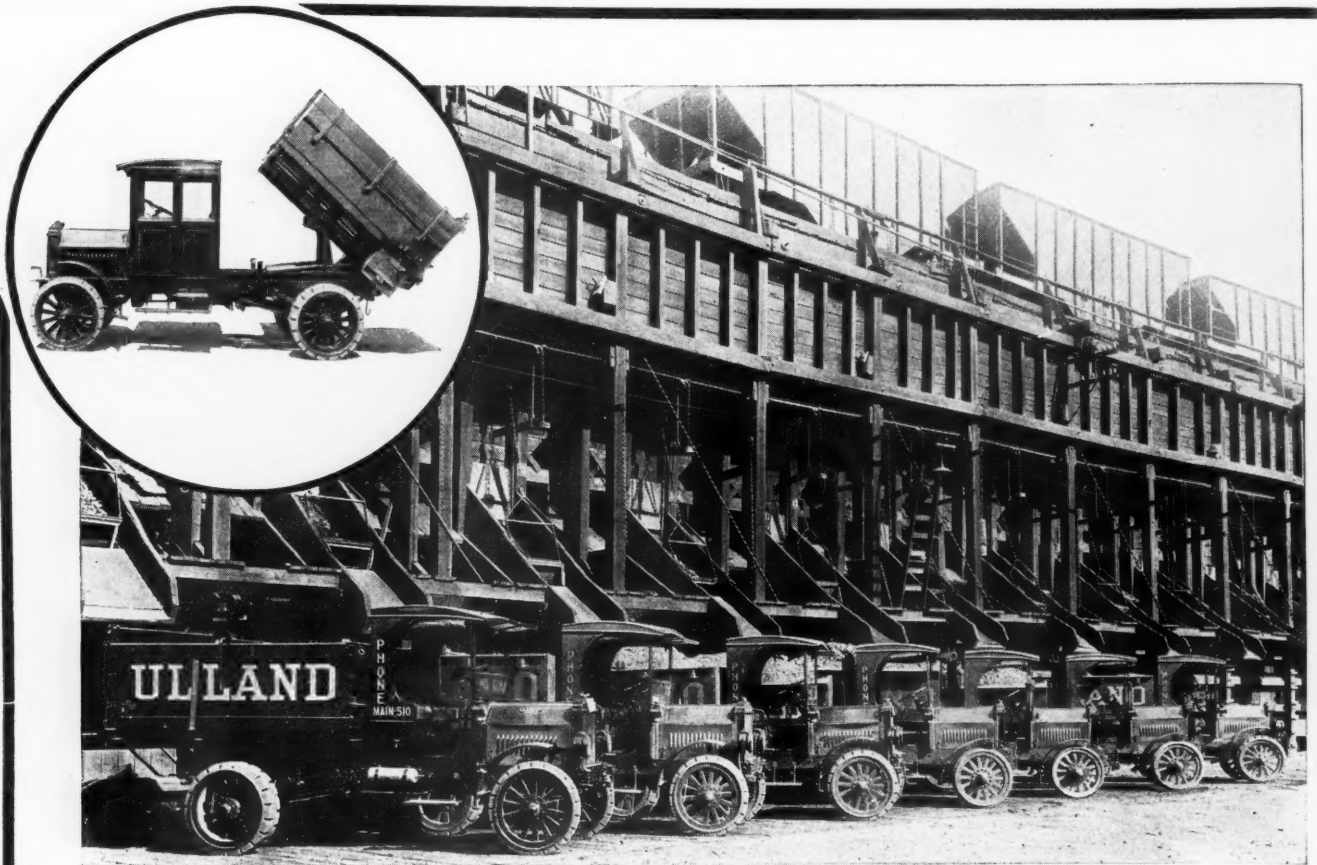
It would be to your advantage to write now for dealer information on the United complete line.

UNITED MOTORS PRODUCTS COMPANY

GRAND RAPIDS

MICHIGAN

"Quality Transportation Units Since 1910"



Fleet of SCHACHT TEN-SPEED COAL TRUCKS. 128" wheelbase with underbody hoist

Carrying Coal to Newcastle?

The coal business that continues to depend upon the old methods of moving its tonnage is practicing the same false economy as those who carried coal to Newcastle.

Fleets of SCHACHT TEN-SPEED TRUCKS are helping to revolutionize the transportation methods of many industries where lower-cost hauling is a big factor in determining profits.

The SCHACHT 128" wheelbase truck with underbody hoist has proved a great economy in coal carrying. It can be maneuvered through narrow city streets and alleys with a big saving in time. This model is also popular with contractors and others requiring a truck of unusual mobility in congested places.

There is profit in both using and selling SCHACHT TRUCKS. Write today for folder C. C.

Capacities—1 to 7½ Tons

THE G. A. SCHACHT MOTOR TRUCK COMPANY

"Pioneers in Motor Transportation"

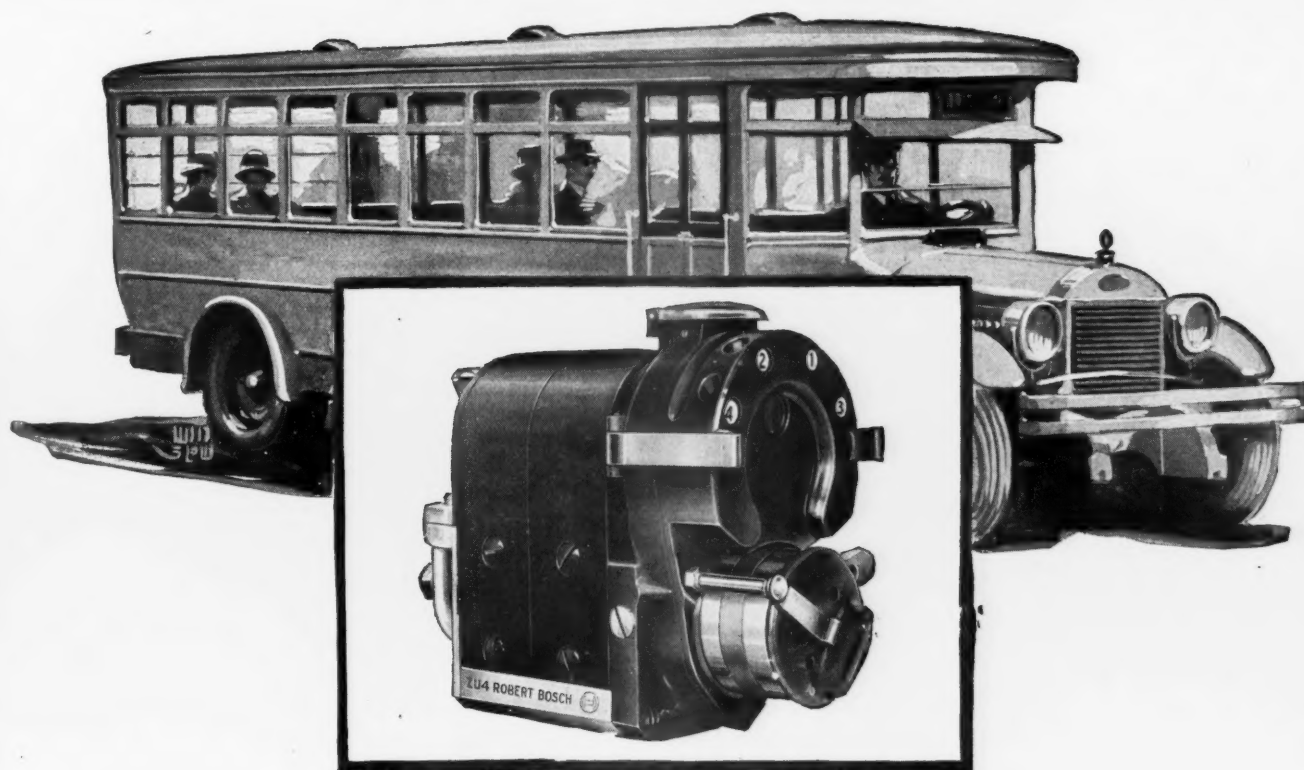
Cincinnati, Ohio

New York Branch: 220 Thirteenth St., Long Island City

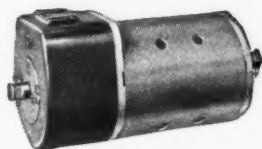
New Jersey Branch: 400 New St., Newark

SCHACHT

Ten Speed TRUCKS



This finest of MAGNETOS will prove to be the cheapest, too



The *Original* Bosch generator replenishes the battery with "tapered" current. This constant voltage means an even balance of battery current at all times.



The *Original* Bosch Horn has won quick popularity among fleet owners, because of its penetrating, yet musical note, so different from the tone of other horns that it secures attention where other horns are unheeded.

YOU may be tempted to save a few dollars on initial cost by using a poor magneto. But remember this: Repairs on inferior magnetos quickly exceed the slightly higher first cost of *Original* Bosch. This finest of magnetos soon pays for itself by staying on the job day in and day out. Ask any automotive engineer or fleet owner who has tested *Original* Bosch Magnetos.

The same high quality that has made the *Original* Bosch Magneto world-famous is to be found in the whole line of *Original* Bosch products: generators, spark plugs, starters, horn, etc. Write for literature on any or all of these.

Robert Bosch Magneto Company, Inc., 119c West 64th St., New York City. Chicago Branch: 1302 South Wabash Avenue.

The Original
Bosch



This trademark and the name "Robert Bosch" are your guaranty of *Original* Bosch quality as known the world over since 1887.

ROBERT • BOSCH • MAGNETO • COMPANY • INC.

No connection whatsoever with the American Bosch Magneto Corporation

STRENGTH—LIGHT WEIGHT—DURABILITY



Standard *uses* DAYTONS

Here is a Standard Truck, equipped with Dayton Steel Wheels, being loaded with 10¾ tons of cement block. Just an incident in the day's work. Nothing unusual for this truck and its Dayton Steel Wheels. Both have strength to endure ponderous loads. Both are built for exacting service.

Heavy loads, rough roads—Dayton Steel Wheels are ever equal to the task—yet they are light in weight. Electric furnace steel and exclusive hollow-arch construction make the Dayton a light steel wheel of great strength. That's why nearly all leading truck makers use Dayton Steel Wheels. Specify them on your next order.

THE DAYTON STEEL FOUNDRY COMPANY, Dayton, Ohio

Dayton
Steel Truck Wheels

PATENTED

TIRE ECONOMY—ACCESSIBILITY—APPEARANCE

DUPLEX

WHERE DUPLEX SERVES IT SAVES



Duplex is Custom Built

And since the beginning of motor transportation Duplex has been carefully building trucks adaptable for the work to be done.

Duplex Economies are the result of accurate machining, expert construction and rigid inspection.

The Duplex Policy of "Building Them to Last" has gained the reward of Long Life, Low Cost of Operation, and Freedom from hours in the repair shop.

Dealers: This is the Duplex Claim for your attention. Owners attest to the soundness and wisdom of the Duplex Policy—and the dealers who sell Duplex are the direct beneficiaries.

There are matters of territory and discount which are interesting. May we go into this subject, in detail, with you?

DUPLEX TRUCK COMPANY

LANSING, MICHIGAN

Quality Engineering, Units, Workmanship

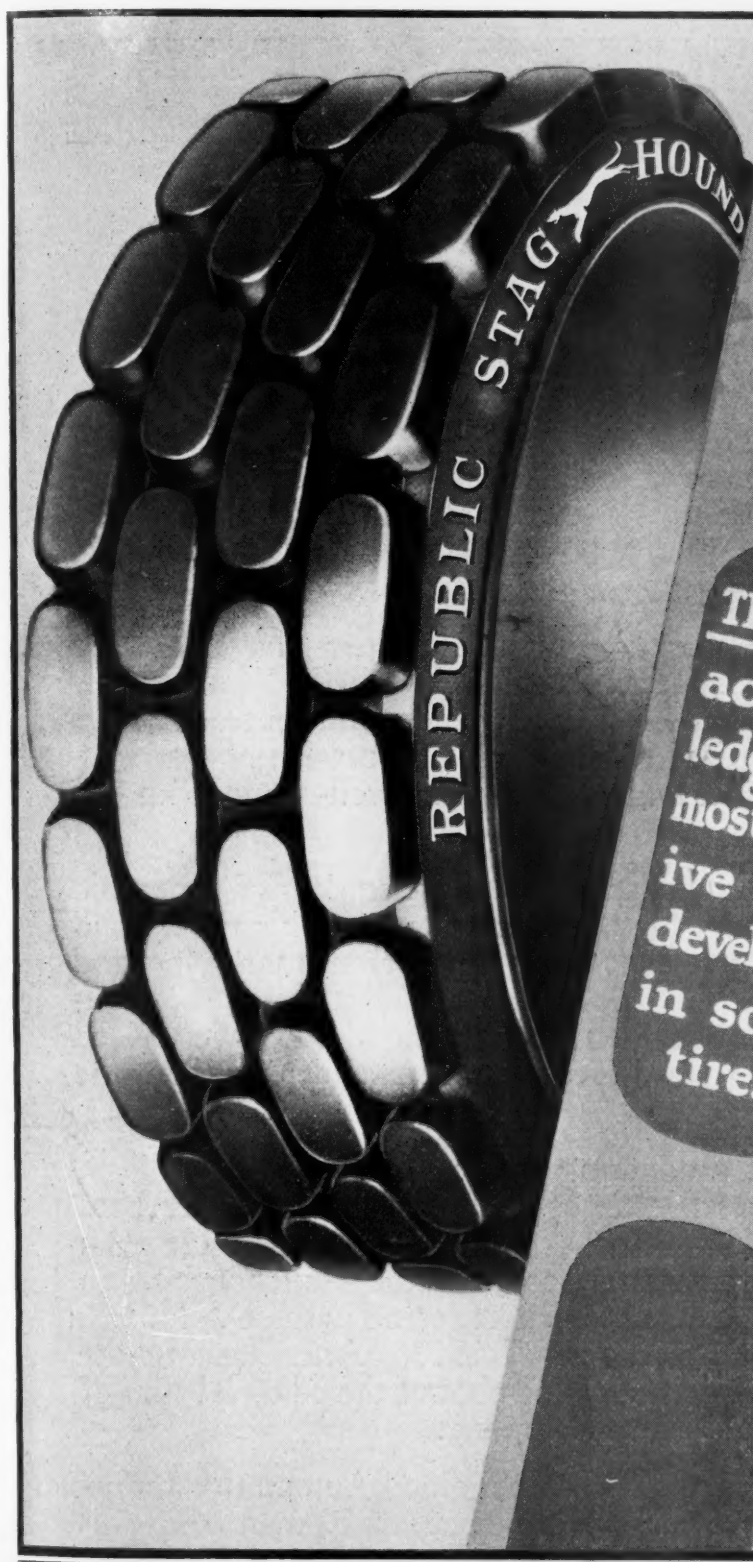
In the Buck Truck will be found world famous major units and all other materials in keeping with the best standards, but the thing that counts is motor truck engineering and workmanship of the highest order.

Buck offers dealers today just what their customers want—powerful, speedy, economical trucks. There are 10 models of 1½ to 7½ tons. Two are four-cylinder speed chassis (34 and 44); two, even speedier six-cylinder models (36 and 46); and six heavy duty chassis whose 7-speed-forward-2-reverse transmissions put them in the speed class. We sell through dealers exclusively wherever dealers are available. Correspondence invited.

The Buck Motor Truck Company

Bellevue, Ohio, U. S. A.

BUCK TRUCKS



MILEAGE
proved by
performance
to average
far beyond
the normal

SAFETY
of truck
driver and
load is in-
sured by
roadgrip of
Staggard
Stud
Tread

TRACTION
acknow-
ledged the
most effec-
tive ever
developed
in solid
tires

ECONOMY
proved~
gas con-
sumption
wear and
tear re-
duced by
Staggard
Stud Truck
Tires

for every
haulage
condition

REPUBLIC STAGHOUND TRUCK TIRES

Writers who mould automotive thought

He Knows the Automotive Industry Like a Book



NORMAN G. SHIDLE
Editor of Automotive Industries

This is one of a series of announcements dealing with the editorial strength of Chilton Class Journal publications. Each issue will carry a brief sketch of an editor or principal contributor to the group.

The purpose of this series is to place before you the facts about our editorial work so you may know its scope and magnitude and the ability, experience and attainments of the men whose articles you read in these publications.

There are various factors which make Norman G. Shidle, editor of Automotive Industries, very successful in his job, but the chief one is this—he knows his industry thoroughly.

Shidle's contacts with the industry have not been one-sided. His first work in this field was in connection with labor management and control and this was followed by activity along marketing and economic lines which gave him a well-rounded knowledge.

He always has been a close student of economic and human factors in industry and his timely and constructive articles on the current marketing and merchandising problems of the automotive manufacturer, based on his investigations, have caused widespread and favorable comment throughout the industry.

After graduating from Swarthmore College, Shidle was director of social welfare at the Merchant Shipbuilding Corporation, Bristol, Pa. He then became a newspaper correspondent and house organ editor, following which he served in the U.S.N.R.F. until the latter part of 1918. After leaving the service he became a member of the editorial staff of the Ronald Press Company.

In December, 1919, he joined Automotive Industries. Two years later he became its managing editor and in 1924 was made editor of the publication.

His other activities include an associate membership in the S. A. E. and the authorship of a book entitled "Finding Your Job" and of numerous articles on automotive subjects.

Writers who mould automotive thought

His Articles Have Punch Because He is Master of His Subject



LEON F. BANIGAN
Editor Motor World Wholesale

The old adage, "Knowledge is Power," is just as true today as it ever was. The most interesting articles and stories are those written by men who *know* whereof they speak—therefore, can write with force and conviction.

Herein lies the secret of Leon F. Banigan's success as a writer of merchandising articles. He *knows* merchandising. He knows it by actual experience, by personal contact with successful merchandisers, by close study of the subject.

When Banigan writes an article on merchandising he doesn't get his information from books written by professors or theorists or from other men's stories. He has a better library than that. He draws on his well-stored mind for facts about existing conditions, methods that have been successful, plans that worked well and ideas that are profitable. The result is a practical, helpful, interesting article.

Banigan's merchandising articles in Motor World were so sound and constructive they have been extensively reproduced in the house organs of many large manufacturers and distributors and by national automotive associations. They also have given him a great standing with the trade.

Mr. Banigan formerly was a newspaper man, serving on New York and New Jersey daily newspapers in the capacity of reporter, editorial writer, automobile editor, financial and business editor and news editor, directing large staffs of news gatherers and special writers.

For six years he has been connected with Motor World, successively being news editor, assistant editor and then managing editor. All this experience has admirably fitted him for his position as editor of MOTOR WORLD WHOLESALE and he can be counted on to make this publication of inestimable value to the wholesalers of the country.

This is one of a series of announcements dealing with the editorial strength of Chilton Class Journal publications. Each issue will carry a brief sketch of an editor or principal contributor to the group.

The purpose of this series is to place before you the facts about our editorial work so you may know its scope and magnitude and the ability, experience and attainments of the men whose articles you read in these publications.



A Business Opportunity—Extraordinary Will You Take Advantage of It?

There may still be an opportunity in your section for you to reap the profits that come with the Federal Authorized Sales Agency Franchise. Each month a few more carefully selected tire merchants qualify as Federal representatives. There are only a limited number of men who can obtain this exclusive franchise, so your opportunity may slip by unless you make your application soon.

Remember this unusual feature about the Federal Franchise—it is an exclusive agency proposition on a long established, well advertised, complete line. Stop a moment and consider carefully the profit advantages this one statement guarantees you. The more you think them over the more you will want to become the Federal Authorized Sales Agent in your vicinity.

*Federal Tires are featured in full-page advertisements
in the Saturday Evening Post and other magazines.*



Why You Should Subscribe:

Information is your most valuable business asset. Experience is simply matured and classified information. The Commercial Car Journal keeps you well informed. It is insurance against embarrassment of not knowing about what's happening in the trade. It acquaints you with new truck models, new parts and accessories. Its suggestions are furnished you in a concise, interesting way with unnecessary verbiage eliminated. It does not attempt to talk about everything—it simply presents to your attention the things in which you are interested. It gives you information that will make your business more profitable.

ORDER BLANK

CHILTON CLASS JOURNAL COMPANY
Chestnut and 56th Streets, Philadelphia

Gentlemen: 19.....

Enclosed please find.....for which send me the

Commercial Car Journal

for.....beginning with the.....issue

Name

Address.....

SUBSCRIPTION PRICE

United States	1 year.....	\$2.00
and Possessions	3 years.....	5.00
Canada, 1 year.....		3.00
Foreign, 1 year.....		4.00



No. 900-A
Double
Chair

*FINEST FOR
BUS SEATING*

*Built up with shaped
and padded double
back and arm panels,
deep sub-spring cush-
ion, and loose
spring air cush-
ion top pads, all
leather or imita-
tion leather covered.
Seat mounted on pressed steel base and
can be either revolving or stationary.*

Comfort a Necessity

YOUR passengers will appreciate the comfort of riding on H. & K. Seats. In these days of selling service to the public this fact is important in public relations policy.

They are strong and durable and yet of a light and practical design and of attractive appearance, while the **PATENTED SPACE-SAVING FEATURE** permits of maximum capacity without crowding. The seat pictured is one of the latest of our comprehensive line.

Styles suitable for every type of motor bus.

HALE-KILBURN COMPANY

Works: PHILADELPHIA

NEW YORK
30 Church Street
ST. LOUIS
Theresa and Clark Aves.

CHICAGO
McCormick Bldg.
ATLANTA
Candler Bldg.

LOS ANGELES
320 S. San Pedro St.
SAN FRANCISCO
903 Monadnock Bldg.

Hale and Kilburn SEATS

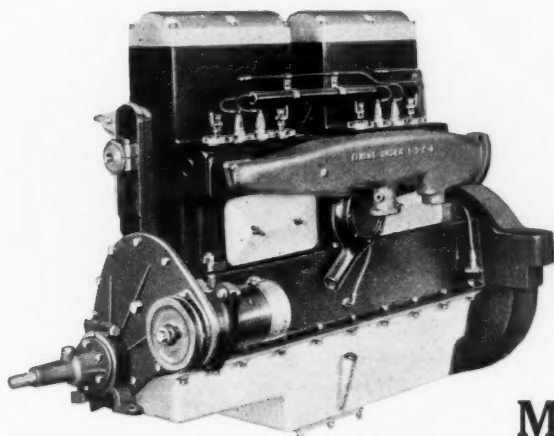
And Now—300

*The New
ECONOMY
Model*

MASTER TRUCKS

*with Latest
JACKSON
Oil Engine*

for Cuba



The Engine that Turns the Trick

The extreme economy of MASTER Motor Trucks is tremendously attractive to foreign buyers. They help run their business on savings.

The American market, too, is on its toes for MASTER Trucks. 5 cent and 6 cent fuel talks out loud. And besides, MASTER Motor Trucks with Jackson Oil Engines deliver the goods.

Dealers, both here and abroad, have trouble to keep from selling their demonstrators. That's how fast they go.

Write for details

MASTER MOTOR TRUCK CO.
CHICAGO ILLINOIS



DIXON'S 677
For Transmissions and Differentials

A graphite lubricant that flows freely over gears in operation, yet will not squeeze out under load nor run from the gears when idle. It resists cold, permitting gears to shift as easily in freezing weather as in midsummer and shows minimum power losses. No. 677, by providing a durable film of lubricant, lowers friction so that wear on gears and bearings is reduced to the minimum.

Write for Booklet 112-G and Dealer Prices

JOSEPH DIXON CRUCIBLE CO.
 Jersey City, New Jersey Established 1827

D X N
TRADE MARK

*How can you judge
 performance values
 without a Cost System?*

A complete system consisting of 500 Driver's Daily Route Cards, 60 Monthly Summary Sheets, 1 Instruction Book, 1 Full Leather Ring Binder, costs \$9.50. Any part of this system may be purchased separately and in any quantity. Prices gladly furnished on request. This is the

MOTOR TRANSPORT STANDARD COST SYSTEM

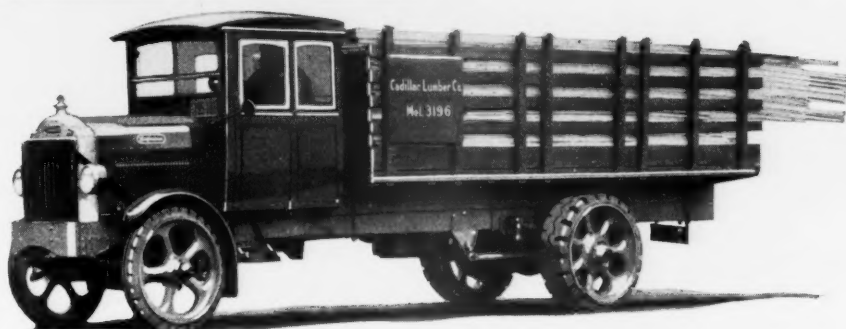
This system gives an exact record of the performance of each truck. Records mileage, ton mileage cost, package mileage cost or unit delivery cost as desired. Shows at a glance the condition of the investment, operating costs, total maintenance costs and fixed charges. This cost system locates profit leaks, waste or inefficiency without fail. It is a reliable basis for general accounting, income tax calculations, etc. It can be handled by any clerk—takes only a few minutes each day. Only two forms to handle—Driver's Daily Route Cards and Monthly Summary Sheets.

Order direct from us. Sample forms and full details will be mailed if desired

CHILTON CLASS JOURNAL COMPANY

Chestnut and 56th Streets

Philadelphia, Pa., U. S. A.



A Strong Sales Appeal

Experienced truck salesmen recognize instantly the strong sales appeal possessed by every Gotfredson model. Goodness is apparent.

Radiator, hood, cab, frame and paint job strive individually and collectively for deserved admiration. Gotfredson Trucks make a favorable impression on any type of buyer—instantly.

Factories:
Detroit and
Walkerville, Ontario

GOTFREDSON CORPORATION
Motor Truck Division
3601 Gratiot Avenue DETROIT

Back of this designed attractiveness Gotfredson engineers have built substantial strength and power to satisfy the most exacting demands. A wealth of performance records from all lines of business prove these claims.

Gotfredson Trucks possess sales value that concedes no rival. Thus a Gotfredson Sales Franchise becomes a rare business opportunity.

Jacks for All Types of Busses and Trucks

EQUIPPED WITH PNEUMATIC TIRES

The No. 18 DOUBLE-LIFT JACK

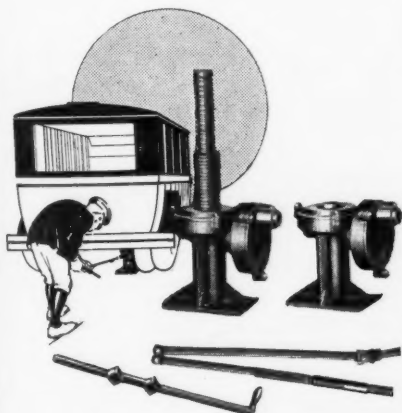
FOR BUSES WITH LOW OVERHANGING BODIES

The modern bus must have a jack with a very low starting height in order to go under the axle when a tire is deflated. The handle of the jack must operate with a rotary motion (in order to avoid the low bus body) and be long enough so that the jack can be pushed

into place and operated from behind the bus. Notice how the following features of the No. 18 meet these requirements:

- 1st. Low starting height, 7 in.
- 2nd. Lift of 9 in. Total height, 16 in.
- 3rd. Long folding handle equipped with semi-universal joint which gives all the advantages of a universal joint but is rigid enough to place the jack in position.
- 4th. Both screws work together, twice as fast as ordinary jacks.

Specifications No. 18. Weight, 19 lbs. Lift, 5 tons. Height of Jack, 7" to 16". Screw Diam.: Outer, 1 7/8"; Inner, 1 1/4".



The No. 12 DOUBLE-LIFT JACK

FOR HEAVY TRUCKS WITH PNEUMATIC TIRES

The axles on such trucks come close to the ground when a tire is flat, thus necessitating the use of a jack with a low starting height. The 10 inch lift of the No. 12 Reliable insures ample clearance for changing a tire.

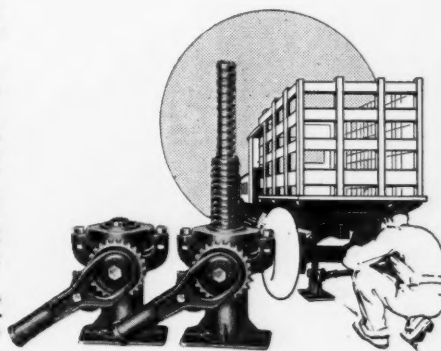
Since the bodies of trucks are high, the operator can insert any length handle desired in the socket of this jack.

This jack operates on the same principle as the No. 18 Bus Jack. The double-acting screws working together result in an unusually rapid jack.

Specifications No. 12. Weight, 17 lbs. Lift, 5 tons. Height of jack, 8" to 18". Screw Diam.: Outer, 1 7/8"; Inner, 1 1/4".

We will be glad to furnish prices and additional information upon request.

There is a sturdy Reliable Jack for every size car, bus and truck.

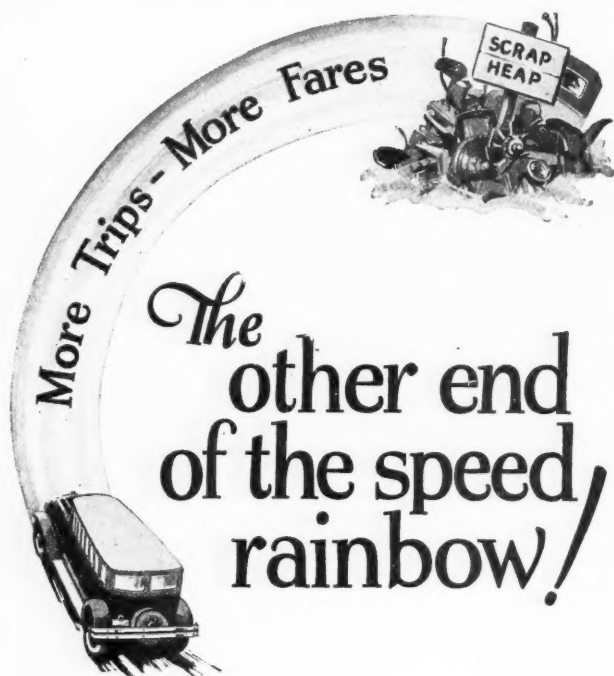


Elite Manufacturing Company

(Dept. C. C.—11)

Ashland, Ohio

RELIABLE JACKS



The other end
of the speed
rainbow!

It may seem like pretty good business—squeezing an extra trip per day by clipping the schedule. Certainly you'll collect more fares, and you may even fool yourself into believing you are making more profit. *But what of the buses?*

What of the wear and tear, repairs and replacements? You know every mile an hour above the safety speed limit doubles and redoubles the sledge hammer blows of road shock, and the tearing, racking force of vibration. No engine and no bus chassis, no matter how well built, can withstand such treatment long. And you soon see your imaginary profits fading away because of rapid depreciation and excessive repair bills.

Pierce Governors (by automatically regulating the engine speed) protect your investment, cut down running expenses and increase bus life. That's why more than 150 manufacturers of motors, buses, trucks and other automotive vehicles have adopted Pierce Governors as standard equipment.

You'll be interested in our booklet that tells the story in facts and figures. Ask for No. 34

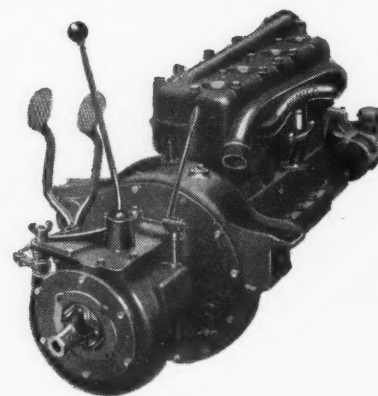
PIERCE
Governors

Manufactured by

The Pierce Governor Co.

"World's Largest Governor Builders"

Anderson, Indiana



Our Prediction Comes True

In the whole broad field of Ford equipment, there is, we repeat, **JUST ONE DEVICE** which transforms a Ford into an honest-to-goodness Sliding Gear Car or Truck.

That device is Himico.

When we made this statement for the first time, a full year ago, it was true. **IT IS TRUE TODAY.**

But Himico is no longer new. The whole world of transportation knows it—buys it—is fast making it standard, heavy-duty equipment.

We predicted that Himico would work this wonder. Our prediction is being amply fulfilled.

Everywhere, Ford dealers are making Himico recommended equipment.

They are installing it in new Fords and are beating sliding-gear competition which, before, they could never meet.

And they are installing it in cars and trucks whose owners find the Ford planetary set insufficient for their unusually severe demands.

Do you know that, dollar for dollar, Himico is **THE BEST-PAYING ITEM IN THE WHOLE FIELD OF FORD EQUIPMENT?**

Let us **PROVE** it! Ask us for the story.

In Three Styles

HIMICO TRANSMISSION replaces Ford planetary set, sliding gears, three forward speeds and reverse. Complete with replacement crank case, \$137.

HIMICO POWER PLANT replaces a Ford engine and transmission. Includes Transmission and Engine of original Ford parts to which we have added High Velocity Head and Hot Spot Manifold. With new Engine, \$209. With remanufactured Engine, \$184 (and your old block). Emergency Fourth Speed 42 to 1 (especially for trucks), \$15. Power Takeoff, \$18.

HINKLEY MOTORS, Inc.

P. O. Box J-839

Detroit, Michigan

(Builders of the famous Hinkley Heavy-Duty
Automotive Engines)

HIMICO
TRANSMISSIONS
POWER PLANTS

This Perfex-equipped Badger Parlor Car is a product of the Menominee Motor Truck Company, Clintonville, Wis.



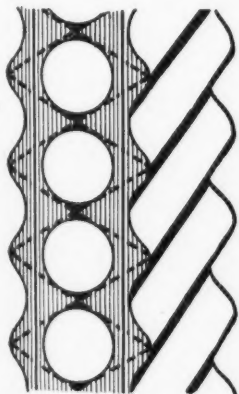
Field Experience Designed The Perfex Radiator

14 successful years of cooling hard-worked motors has proved and improved the value of Perfex design, until it stands today as literally the product of field experience.

No other radiator has the Perfex bronze-core unit construction or the cross-braced feature, or the compact bronze water channels which provide an enormous area of trouble-proof radiating surface. These exclusive Perfex points alone merit the careful investigation of everyone interested in efficient cooling. There are many other advantages. We have convincing facts that Perfex offers a cooling system which will add to owner satisfaction and to the good will they bear a product.

Our engineering department will gladly collaborate with your own or offer a complete designing service if desired. Write us, placing your problems before us.

The Cross-Brace Principle in Perfex



The heavy broken lines indicate the strong, cross-braced reinforcement provided by the hundreds of soldered points in Perfex exclusive construction.

Any twisting or wracking of the chassis exerts a force that is met by the greatest strength of Perfex Bronze-Core Radiators. The illustration at the left shows a diagrammatic view of two Perfex Water Channels, with the corrugated walls. The "points" or "lips" formed by the curved walls are soldered together at each point front and back. These soldered points form a series of re-inforcing bars that provide cross-bracing in every direction. Each square inch of surface is braced in this manner, giving the Perfex Core such strength that 74 manufacturers have standardized on it.

Anyone interested in efficient cooling of hard worked motors is invited to send for full information about Perfex Radiators and our service of engineering and supply

RACINE RADIATOR COMPANY, Racine, Wisconsin

PERFEX
THE PERFECT RADIATOR



Operating Costs Can Be Reduced

Accurate, reliable, infallible mileage records as a basis for a positive control of operating costs—that's what scores of leading bus companies are getting through the use of this improved mileage recorder.

The Ohmer Odometer is especially designed for the hard, gruelling service incident to truck and bus operation.

It is built for utility. Rugged and strong, it stands rough usage. Its big figures, always in perfect alignment, show at a glance the cumulative mileage total.

It is built for long life. It is a marvel of mechanical simplicity. The small number of parts are big and strong. They are driven from the transmission, and move with only 1/16 the speed of an ordinary speedometer. This results in a long life of trouble-free service. There is nothing to break—nothing to wear out.

It is built for convenience. It is easily and quickly installed wherever you want it—on dash, floor, seat support, or outside frame. And once installed, it requires no further attention.

Back of it are 26 years of engineering experience and manufacturing resources in the developing and perfecting of various precision recording instruments. It is a product of the largest manufacturer in the world of mileage and fare recorders.

Get more of the details of this remarkable Odometer. See for yourself why so many of the largest fleet owners have adopted it as standard equipment. Find out how it is saving money for them, and why it will save money for you. There is no obligation of any kind. Write now for descriptive folder and copy of our free book giving a simplified system of truck and bus cost accounting.

OHMER FARE REGISTER COMPANY
Dayton, Ohio

OHMER
ODOMETER

PRODUCTS OF OHMER FARE REGISTER CO.

Odometers
Hub Odometers
Truck Auditors
Recordographs
Taximeters
Fare Registers
Fare Boxes
Transfer Machines

LOOK FOR THIS SIGN





Sell "Income Protection" to Car Rental Companies

THEY sell Mileage—which has to be measured. And they lose if it's not measured *in full*.

You can offer an accurate, full-mileage recorder which can't be tricked to register falsely; can't be put out of running by the roughest service. The

Veeder

HUB ODOMETER

—now supplied in a special model for Rental Companies, with a distinctive nickel-plated cap. It looks as good as the instrument wears—and it's the one place to look for the right figures on rental dues!

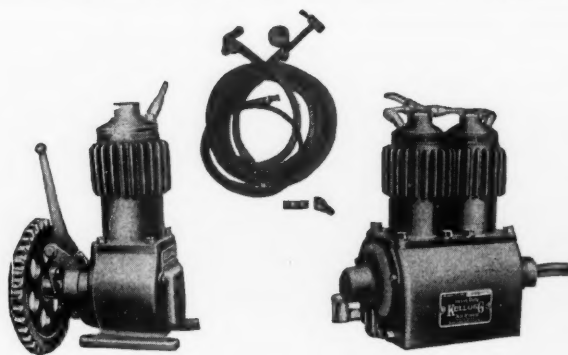
Yes, we've special circulars for your use in selling "Veeders" for Ford, Star, Chevrolet cars. List price of the model for Rental Companies, \$15.

The Veeder Mfg. Co.
10 Sargeant Street Hartford, Conn.

Sales and Service Stations in

Atlanta, Ga.
Baltimore, Md.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Dallas, Texas
Denver, Colo.
Detroit, Mich.
Indianapolis, Ind.
Kansas City, Mo.
Los Angeles, Cal.
Montreal, Quebec

New Orleans, La.
New York, N. Y.
Philadelphia, Pa.
Pittsburgh, Pa.
Providence, R. I.
Rochester, N. Y.
St. Louis, Mo.
St. Paul, Minn.
San Francisco, Cal.
Syracuse, N. Y.
Tacoma, Wash.
Toronto, Ontario
Washington, D. C.
—and other cities



Judge Kellogg by the Company it keeps

The fact that dealers for the following makes of trucks have found that they make and keep friends by recommending the installation of Kellogg engine driven tire pumps for every job they sell on pneumatic tires, is a positive indication that you can do the same thing.

USERS

Acme	Gotfredson
Advance Rumely	Guilder
American-LaFrance	Hawkeye Dart
American Motor	Huffman
Body	Larrabee
Atterbury	Maccar
Biederman	Mack
Brockway	Maxim
Century	Minneapolis Steel
Clydesdale	Nelson
Coleman	Pierce-Arrow
Commerce	Republic
Corbitt	Ruggles
Day-Elder	Standard
Diamond T	Stewart
Federal	United
Four-Wheel Drive	White
Garford	Wichita
Gary	Winther
G. M. C.	Yellow Coach

KELLOGG MFG. CO.
Rochester, N. Y.

*Also manufacturers of air compressors
for service stations and air brakes*

USERS OF SPICER PROPELLER SHAFTS

(One of a series)



THERE are many unexpected angles to this universal joint question; our good friend Fageol points out a few in this letter:—

"A motor car, like a chain, is no stronger than its weakest unit.

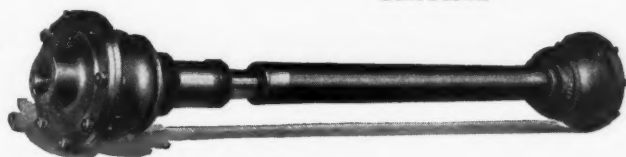
"Years of transportation experience has taught us that one of the places where trouble most frequently develops is in the drive line. We know that only by using propeller shafts and universal joints of the same high degree of excellence as our other units can we hope to get the full benefit of the stamina and durability that is built into the other units.

"The laboratory of practical experience has proved the correctness of our judgment in selecting Spicer propeller shafts.

"Over one hundred million miles of service under the most gruelling conditions, through the desert sands of Arizona, over the almost endless grades of the Rocky Mountains, battling the blizzards and snowdrifts of Canada, the Great Lakes and the mid-western prairies—the quality of the Fageol units has taken these great coaches on and on where nothing else kept moving.

"Grease her up and let's go."

(Signed) Fageol Motors Company
Carl Abell



Associated Spicer Companies

Spicer Manufacturing Corporation, South Plainfield, N. J.

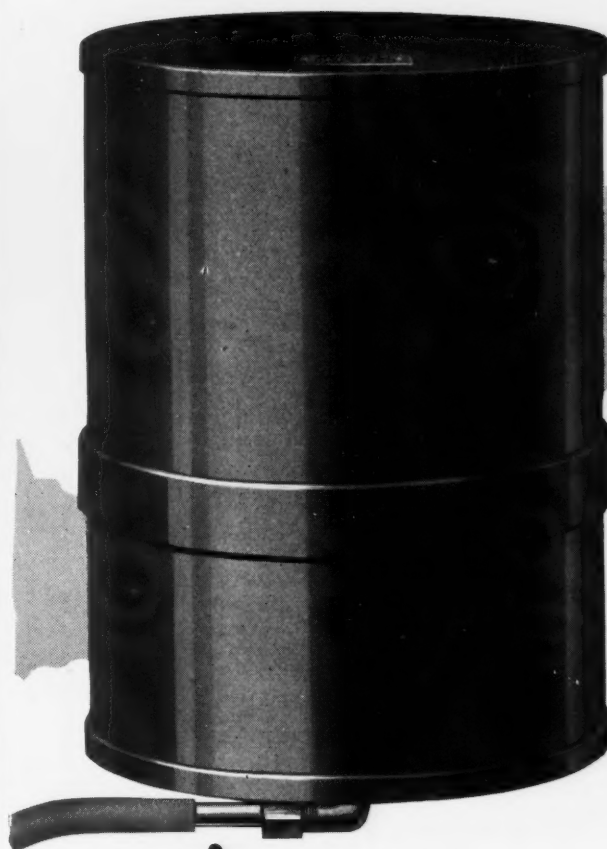
Parish Manufacturing Corporation, Reading, Pa.

Salisbury Axle Company, Jamestown, N. Y.



1720-6

Stewart-Warner



New! Radiator Condenser

"One Alcohol Solution
will last all Season"

This is an accessory for which there has been a great need and Truck and Bus owners will appreciate the great saving and protection it affords.

The Stewart-Warner Radiator Condenser is a container 8½ in. high and 6½ in. wide.

The Radiator Condenser attached to the overflow pipe of the radiator, catches every drop of liquid that overflows or boils over and THEN RETURNS it to the radiator when the circulating system cools off.

It will cut your alcohol expense to almost nothing and also insure your solution against evaporation and weakening.

Write for our booklet fully describing this remarkable new achievement.

List \$6.50

West of 100° Meridian \$6.75

STEWART-WARNER SPEEDOMETER CORPORATION
CHICAGO - U. S. A.

Why Keep on Paying This Tax?

Everybody expects to pay some taxes, but why impose unnecessary taxes on yourself?

Do you realize that every time you drive your car on an unpaved highway you are actually taxing yourself one to four cents a mile?

This is the cost of increased repair, tire and gasoline bills.

Highway research has definitely established these facts.

Each year you tax yourself in this way a good many dollars.

Instead of spending this money for increased transportation costs, why not invest it in Concrete Highways and pay yourself some dividends?

Concrete Roads and Streets pay for themselves in the saving they effect on the cost of motoring.

Their maintenance cost is so low that this saving alone returns good dividends on the investment, year after year.

You are imposing an unnecessary tax on yourself from which you get no return, by failing to work for more Concrete Highways.

Not in a long time have general conditions been so favorable for carrying on such public works as permanent highway building.

Your highway authorities are ready to carry on their share of this great public work. But they must have your support.

Tell them you are ready to invest in more Concrete Highways, now.

PORTLAND CEMENT ASSOCIATION

*A National Organization to Improve and
Extend the Uses of Concrete*

Atlanta	Dallas	Kansas City	New York	St. Louis
Birmingham	Denver	Los Angeles	Oklahoma City	Salt Lake City
Boston	Des Moines	Milwaukee	Parkersburg	San Francisco
Charlotte, N. C.	Detroit	Minneapolis	Philadelphia	Seattle
Chicago	Indianapolis	Nashville	Pittsburgh	Vancouver, B. C.
Columbus	Jacksonville	New Orleans	Portland, Ore.	Washington, D. C.

MOTOR TRANSPORT

Motor Transport is devoted to the development of the art and science of motor transportation as it applies to the transport of commodities by Motor Truck, the transport of passengers by Motor Bus and the transportation of both by Gasoline Railroad Car.

Written for those concerned with the operation of fleets—Motor Transport's mission is to analyze all problems which properly come within its scope—and to assist in the solution of these problems by means of editorial discussion.

The five major problems which the Fleet Operator has to contend with in the handling of his fleet and which Motor Transport helps to solve, are

*Fleet Maintenance
Organization Plans
Correct Costs
Operation of Fleet
Handling of Drivers*

Each issue of Motor Transport contains articles based upon the factors outlined above and these articles are written from first-hand investigations and study by our editors in the field.

Motor Transport is published monthly, on the 10th. The subscription price is \$2.00 per year.

Write for a Sample Copy

Chilton Class Journal Co.

Chestnut and 56th Sts.

Philadelphia, Pa.

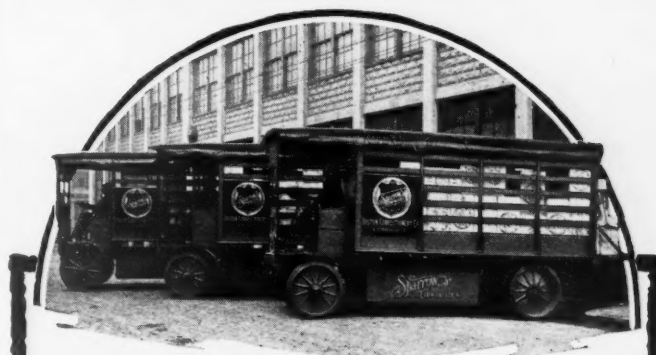


HAND-HOIST dump bodies for every make of truck up to 2½ ton capacity. We also manufacture special steel bodies of every description for ice and ice cream manufacturers, coal dealers, contractors, general haulers and municipalities. We solicit inquiries from authorized truck dealers.

THE GALION ALLSTEEL BODY COMPANY

Galion

Ohio



Fleets that do not have to be replaced, but for 10 or 20 years steadily grow in earning power with each added unit

**WALKER
VEHICLE COMPANY**
Leading Manufacturer of Electric Street Trucks
Chicago

WALKER ELECTRIC TRUCKS

LOWEST TRUCKING COST ON CITY ROUTES

Selden Motor Trucks

"In-Built Quality Model" for Every Haulage Need

Two 6-cylinder speed models. PACE-MAKER, 1¼-ton capacity; ROAD-MASTER, 2¼-ton capacity.

Heavy-duty, 4-cylinder models in 2, 2½, 3, 3½, 4 and 5-7 tons capacities.

DUAL-RANGE TRANSMISSION having 7 speeds forward and 2 reverse available in all heavy-duty models from 2½ tons up. Provides super-pulling ability and increased road speed.

SPECIAL 6-CYLINDER MOTOR-BUSES FOR CITY AND INTERURBAN SERVICE.

Exclusive selling rights granted dealers. Write for particulars—grasp this opportunity to increase your yearly profits.

Selden Truck Corporation
ROCHESTER, N. Y.

BOWEN SYSTEM

For All Motor Cars and Trucks

AN AUTOMATIC system of lubrication that enables the owner to perfectly oil every chassis bearing in a few seconds without leaving the driver's seat.

It banishes forever that old familiar bugbear—dirty, ineffective, makeshift lubrication. No more disagreeable, messy jobs filling grease or oil guns or similar devices and tediously applying to each bearing in turn.

A mere pressure of the foot on the lubricator button—projecting up through the floor boards—and every chassis bearing is automatically and simultaneously flooded with a shot of oil forced in under heavy pressure.

The volume of oil forced into each bearing is measured—one drop or a teaspoonful according to exact requirements, insuring adequate and perfect lubrication without waste.

Manufactured by
Bowen Products Corporation
Auburn, New York

The BOWEN SYSTEM is standard equipment on the CLEVELAND SIX, all models



**No Racking of Chassis—
No Sales Resistance**

When you talk the "Saftee" to a prospect, the one big obstacle—"Racking of the Chassis"—is eliminated; in fact, the easy working, chassis saving qualities of this superior dump truck are your strong points in making a sale.

But let us tell you more about its easy selling features

Saftee
Ditwiler Manufacturing Co.
Galion, Ohio
DUMP BODIES
AUTOMATIC or HAND OPERATED
FOR ALL 2-TON OR LIGHTER TRUCKS



Standardization!

In that one word you have the key to profits in the motor truck field.

Our new franchise, backed by 16 years' experience, *does not require you to stock parts—or put your money into anything you cannot see as good business.*

We have standardized our trucks; now we have put our sales franchise on the same plane. Can we say more?

Write us today for details!

The United States Motor Truck Co.
CINCINNATI, OHIO

Established
1909

Capitalization
\$1,750,000

Now a Recognized Necessity

by Manufacturers and Users who demand finer motor performance, lower operating costs, and minimum upkeep expense.

The UNITED AIR CLEANER

Oldest and most widely adopted, with 5 years' successful record. Standard equipment with more than 100 manufacturers using internal combustion engines. Simplest and most compact design.

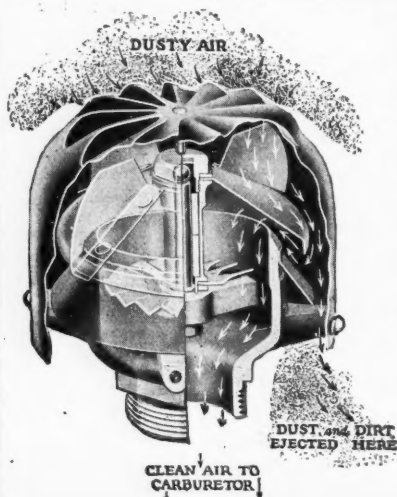
Shuts out 99% of all road dust. Requires no oil, no water, no emptying, no cleaning, no adjustment, no attention whatever.

Guaranteed for the life of the motor.

Made in styles to fit all motor cars, trucks, tractors, buses and industrial motors.

Write for price list and further information.

United Manufacturing & Distributing Co.
9704 Cottage Grove Ave.
Chicago, Ill.



Suggest to Your Next Customer that he use the—

Motor Transport Standard Cost System. A simple convenient and inexpensive method of keeping close tabs on trucks and drivers.

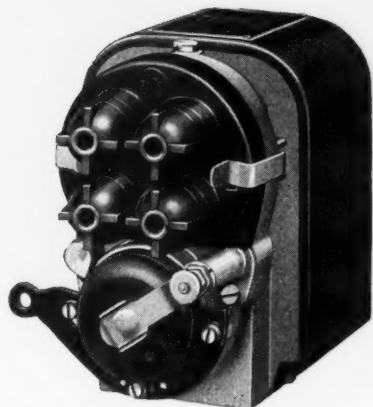
It costs only \$9.50 for 500 Driver's Cards, 60 Monthly Summary Sheets, 1 Complete Instruction Book, 1 Binder.

CHILTON CLASS JOURNAL COMPANY

Chestnut and 56th Sts.

Philadelphia

TEAGLE



**SIMPLICITY-RUGGEDNESS
EFFICIENCY-RELIABILITY**

Conforms to S. A. E. Standards

Write for Further Information

The Teagle Co.
Cleveland, Ohio

"The Simplest Magneto of Them All"

An H-W Reed Motor Coach Seat of New Design

Luxureed
49-P. Double



WHERE seating space must be conserved our new 49-P Luxureed is cordially welcomed by motor coach builders. Short arms, properly sloped backs and curved seat-fronts allow close placing with plenty of knee-room for passengers and storage for luggage. Luxureed seats have the built-in comfort and sturdiness so essential for long tours.

H-W bus-seating experts are at your service without charge.

HEYWOOD-WAKEFIELD SALES OFFICES

HEYWOOD-WAKEFIELD 1359 Railway Exchange Building, Chicago, Ill.
HERBERT G. COOK Hobart Bldg., San Francisco, Cal.
THE G. F. COTTER SUPPLY CO., Houston, Tex.
THE RY AND POWER ENGR'G CORP., Montreal and Toronto, Canada

Heywood-Wakefield
REG. U.S. PAT. OFF.

FORD TRIBLOC



Not just "good enough"
but a little better
than "just right"

Among other tests, every Ford Tribloc Chain Hoist must pass an individual load test before it is released for shipment—one of the reasons why Ford Hoists will be found in every kind of plant from food factories to steel mills—wherever reliable performance is more important than a hoist that is "good enough."

They are powerful—safe—durable—the kind of a hoist that meets the strict Government specifications and the comparative endurance tests of railroads.

Write for Catalog 7-B

FORD CHAIN BLOCK CO.
Second and Diamond Sts.
Philadelphia, Penna.

(2275-D)

NORTH EAST

Starting Lighting Ignition Horns Speedometers



Starter-Generators Starting Motors
Ignition-Generators Ignition Units
Generators Regulators
Switches Horns
Speedometers

NORTH EAST SERVICE INC.

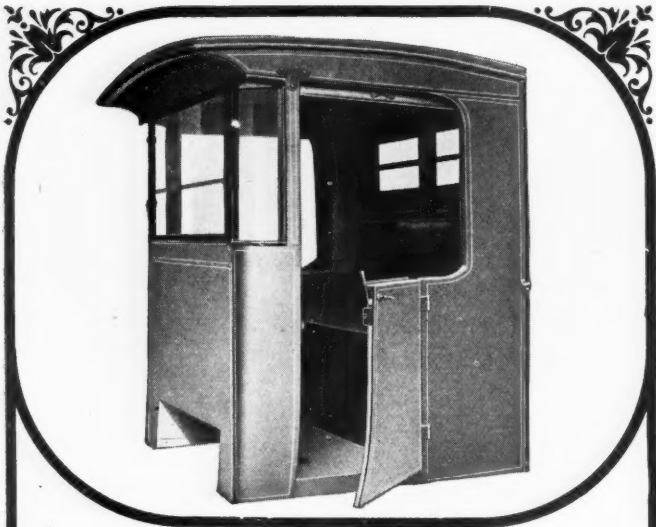
ROCHESTER, N.Y. U.S.A.

Official Service for North East Equipment

Atlanta London New York
Chicago Paris Rochester
Detroit San Francisco
Kansas City Toronto

Service Stations in Cities of Importance
throughout the World.

NORTH EAST ELECTRIC CO.
ROCHESTER, N.Y. U.S.A.

**ALWAYS GAINING!**

Every season puts the Weatherproof Cab still further ahead with truck operators and manufacturers—because it has set standards of usefulness, of long life and of dollar for dollar value, which are not equalled. It will pay you to know Weatherproof Cab specifications and prices. Write today.

Weatherproof

Weatherproof Body Corporation
438 Shiawassee St., Corunna, Michigan

Builders of Truck Cabs, Bus Bodies, Automobile Tops, Passenger and Commercial Bodies

A Never Ending Trial:

SERVICE IS THE JUDGE

YOU ARE THE JURY

FULLER IS THE DEFENDANT



Bus Builders!

We are particularly interested in having you supplied with complete information regarding the exceptional qualities of Fuller GU-17 Standard, and GU-17 Overgeared, Bus Transmissions. A study of their past performances and detailed specifications will be a big revelation.

Have You Seen Prints of New Model RU?

Members of the
Motor Truck Industries, Inc.
of America

FULLER & SONS MANUFACTURING CO.
KALAMAZOO, MICH.

Wherever trucks and buses are operating, Fuller Transmissions are on trial with Service as the judge, and you, the fleet operators and owners, as the jury.

—And so, as manufacturers of these transmissions, we are daily receiving reports from every corner of the automobile world regarding the progress of these units.

We are glad to report to you that the universal comment is so enthusiastic that we do not have to hesitate for an instant in bringing Fuller Transmissions to your attention.

If you have transmission problems, let us show you how we have already met and overcome such problems and needs just as we can conquer yours with Fuller knowledge, engineers and transmissions. Your correspondence is cordially invited.



"OLD TIMERS"

Don't miss Splitdorf at the radio shows!

Splitdorf merchandising plans are of vital interest to merchants who desire to build a permanent business.



MODERNIZE THE LUMBER TRUCK

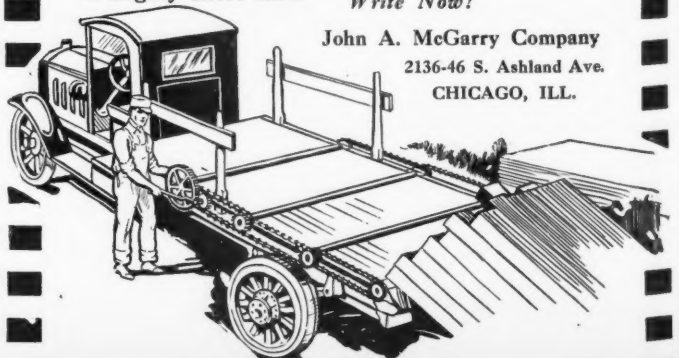
Lumber dealers know that their trucks are paying for themselves only when they are hauling lumber and not when they are standing still or being loaded and unloaded.

And so, when you show them how the McGarry Lumber Loading and Unloading System always gets the maximum amount of work out of a truck, you promptly have an interested prospect easily converted into a friendly customer. Then, on each sale, you get a generous profit!

If you are looking for added "sure bet" profits, the McGarry System will earn them. If you write us now—even before you turn the paper and accidentally forget this "ad"—and, after getting all the McGarry details, take on this line, you certainly will make some added profits in a mighty short time.

Write Now!

John A. McGarry Company
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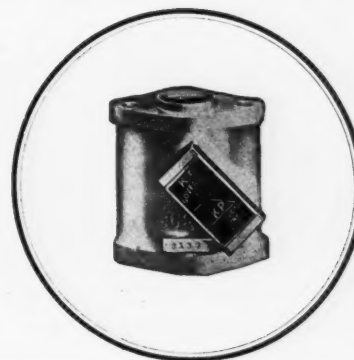


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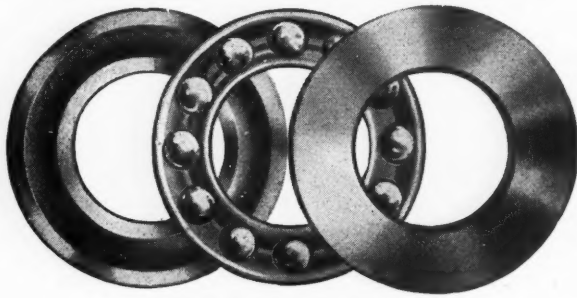
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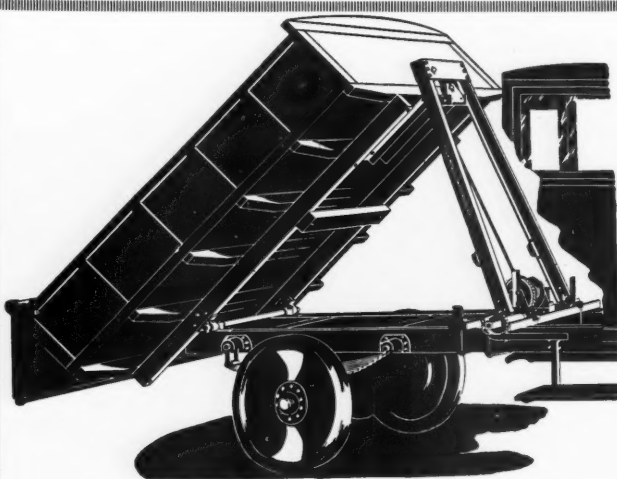
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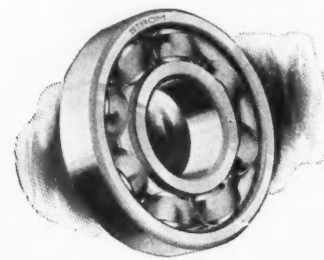
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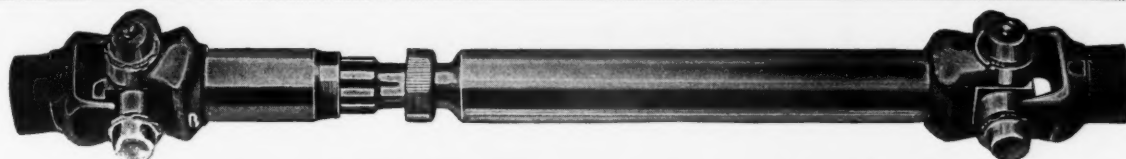
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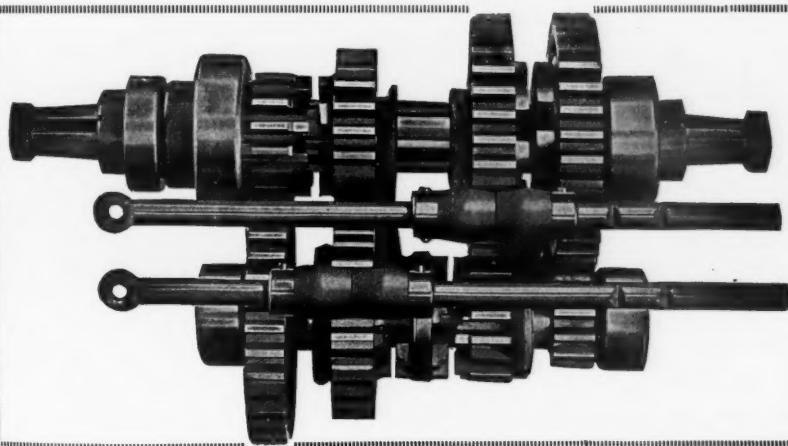


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Advertiser's Index

A

Acme Motor Truck Co. 115
 Albertson & Co. 80
 American Malleable Castings Association 90
 Atterbury Motor Car Co. 74

B

Bearings Co. of America 114
 Bethlehem Steel Co. 59
 Blood-Brothers Machine Co. 115
 Bosch, Robert, Magneto Co., Inc. ... 93
 Bowen Products Corporation 109
 Buck Motor Truck Co. 96
 Buda Co. 64

C

Chilton Class Journal Company. 98, 99
 Clark Equipment Co. ... Second Cover
 Commerce Motor Truck Co. 81
 Continental Motors Corporation
 Back Cover
 Cotta Gear Co. 115

D

Dayton Steel Foundry Co. 94
 Ditwiler Manufacturing Co. 110
 Dixon, Joseph, Crucible Co. 102
 Duplex Truck Co. 95

E

Eaton Axle & Spring Co.
 Front Cover
 Eisemann Magneto Corporation ... 113
 Elite Manufacturing Co. 103

F

Federal Rubber Co. 100
 Ford Chain Block Co. 111
 Fuller & Sons Manufacturing Co. 112

G

Galion Allsteel Body Co. 109
 Garford Motor Truck Co. 87
 General Woodwork Corp. 3
 Goodrich, B. F., Rubber Co. 76
 Gotfredson Corporation, Motor
 Truck Division 103
 Graham Brothers (A Division of
 Dodge Brothers, Inc.) 88
 Gramm & Kincaid Motors, Inc. ... 2

H

Hale-Kilburn Co. 101
 Heywood-Wakefield Co. 111
 Highland Body Mfg. Co. 75
 Hinkley Motors, Inc. 104
 Hyatt Roller Bearing Co. 118
 Hydraulic Hoist Manufacturing Co. 7

I

International Harvester Co. of
 America, Incorporated 6

J

Johns-Manville, Inc. 85, 86

K

K. P. Products Co., Inc. 113
 Kellogg Manufacturing Co. 106

L

Lehigh Co. 65, 66, 67, 68
 Lycoming Manufacturing Co. 70

M

McGarry, John A., Co. 112
 Marlin-Rockwell Corp. (Successor
 to Strom Ball Bearing Mfg. Co.) 114
 Master Motor Truck Co. 101

N

Naceskid Service Chain Co. 113
 New Departure Manufacturing Co. 5
 North East Electric Co. 111

O

Ohmer Fare Register Co. 105

P

Parish Manufacturing Corp. 107
 Pierce Governor Co. 104
 Piston Ring Co. 117
 Portland Cement Association 108
 Prest-O-Lite Co., Inc., The 78, 79

R

Racine Radiator Co. 105
 Republic Motor Truck Co., Inc.,
 Third Cover
 Republic Rubber Co. 97
 Rock Manufacturing Co. 114
 Ross Gear & Tool Co. 61
 Ruggles Motor Truck Co. 63

S

Salisbury Axle Co. 107
 Schacht, G. A., Motor Truck Co. ... 92
 Selden Truck Corporation 109
 Service Motors, Incorporated 1
 Silent Hoist Co. 115
 Spicer Manufacturing Corporation 107
 Splitdorf Electrical Co. 112
 Stewart Iron Works Co. 113
 Stewart Motor Corporation 71
 Stewart-Warner Speedometer
 Corp. 107

T

Teagle Co. 111
 Thompson Products, Inc. 82, 83
 Timken-Detroit Axle Co. 89
 Timken Roller Bearing Co. 4

U

United Mfg. & Distributing Co. ... 110
 United Motors Products Co. 91
 United States Motor Truck Co. ... 110

V

Veeder Mfg. Co. 106

W

Walker Vehicle Co. 109
 Ward Motor Vehicle Co. 52
 Weatherproof Body Corporation ... 112
 White Co. 73
 Willys-Overland, Inc. 84
 Wood Hydraulic Hoist & Body Co. 77

Z

Zenith Detroit Corporation 69

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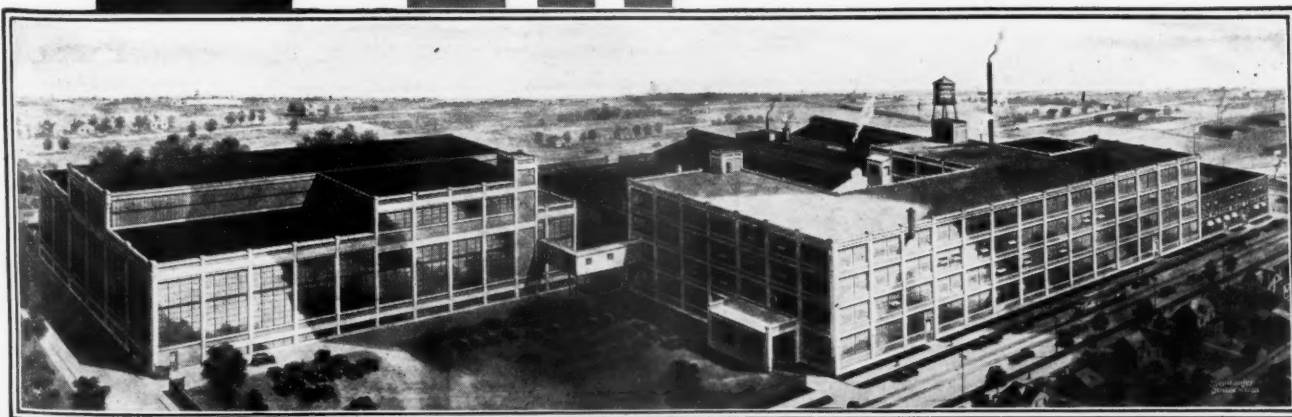
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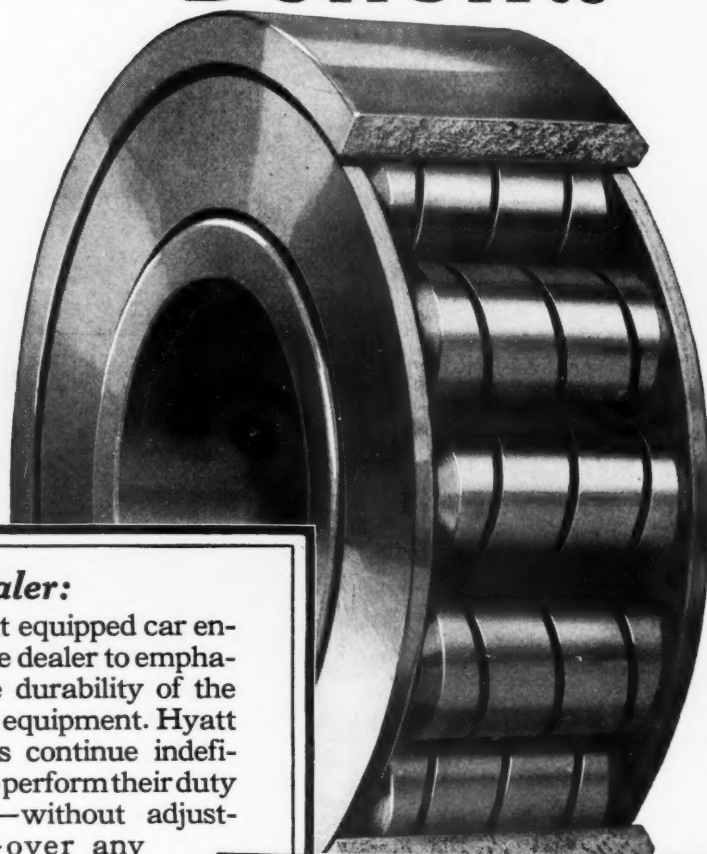
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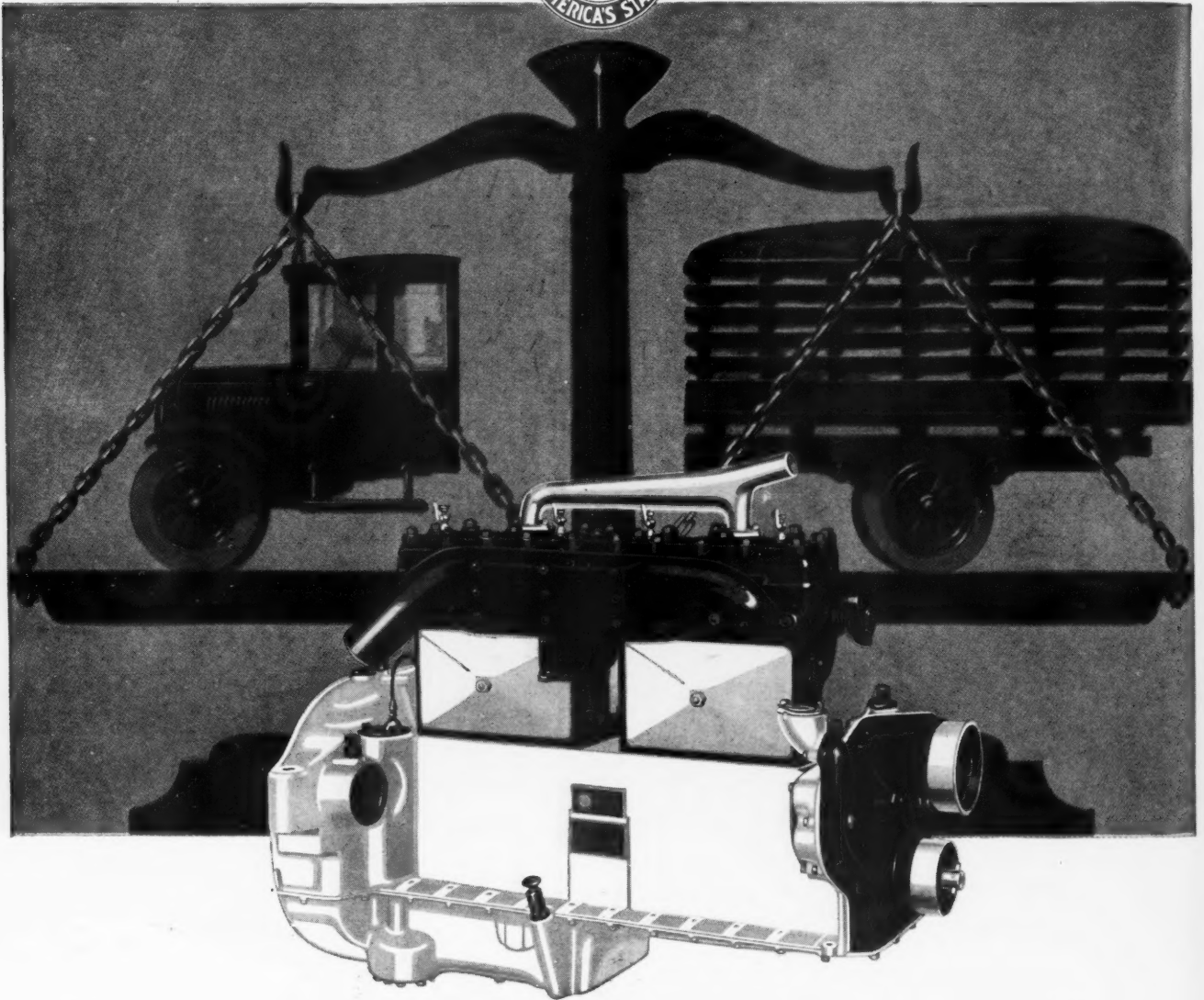
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